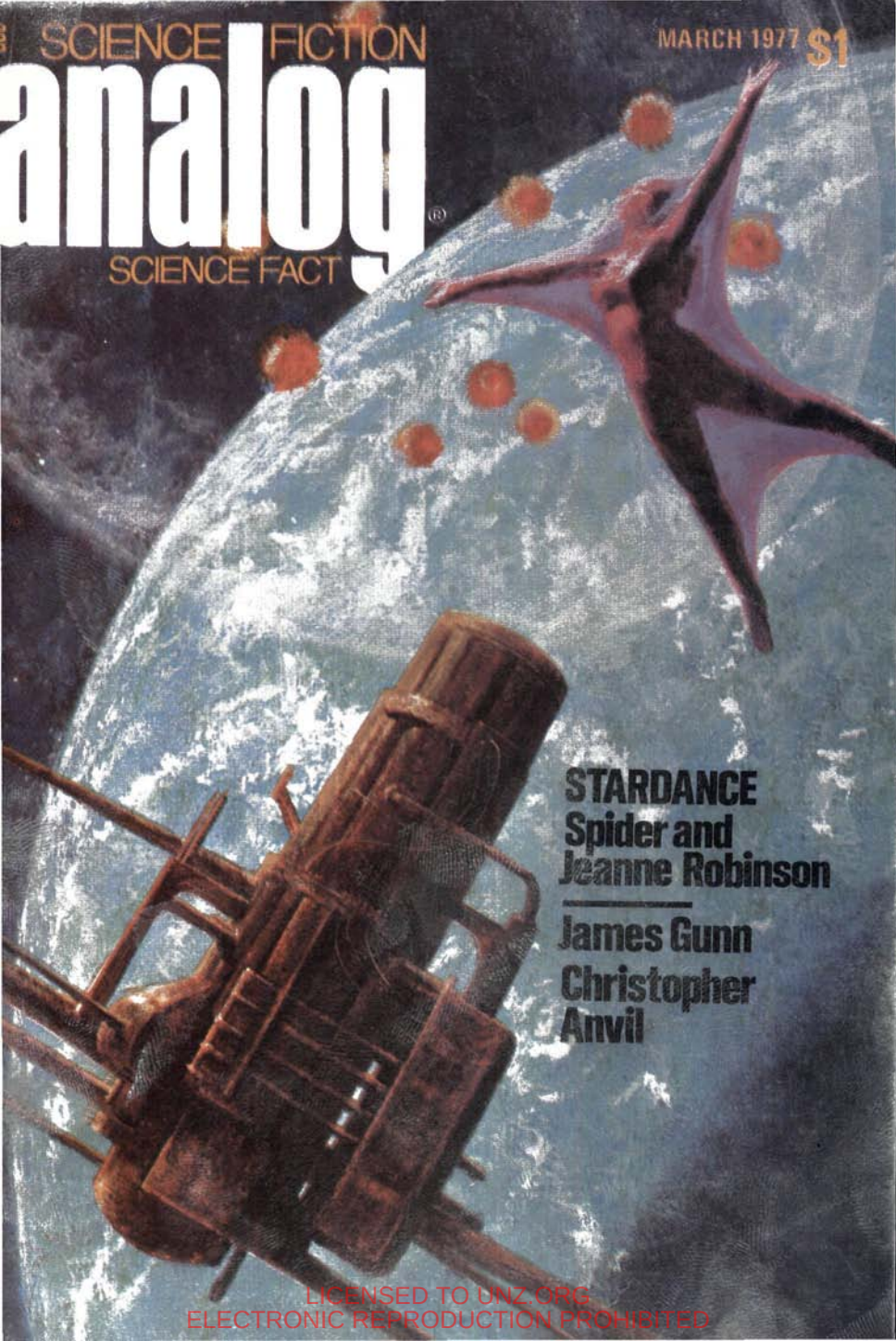

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A Calendar of Upcoming Events

4-6 March 1977
ArtKane II (Science Fiction and Fantasy Art Conference) at the Yorktowne Hotel, York, Penn. Guest of Honor—Kelly Freas. Registration: $5 until 31 January 1977, $7 thereafter. Info: ArtKane, c/o Bill Hawkins, R.D. 1, Hochessin, DE 19707.

11-13 March 1977
LEPRE CON 3 (Arizona regional SF conference) at the South Rim of the Grand Canyon (Kachina and Thunderbird Lodge). Guest of Honor—Robert Silverberg; Toastmaster—Marion Zimmer Bradley. Registration—$5 in advance, $6 at the door. Info: Box 1749, Phoenix AZ 85001.

16-19 March 1977
Symposium on Archaeometry and Archaeological Prospection at the University of Pennsylvania, Philadelphia, Penn. Info: R. Maddin, LRSM 400/K1, University of Pennsylvania, Philadelphia PA 19174.

18-20 March 1977
MARCON XII (Ohio regional SF conference) at the HoJo Motor Lodge North, Columbus, Ohio. Fan Guest of Honor—Howard DeVore. Registration $5 until 1 March 1977, $6 thereafter. Info: Ross Pavlac, 4654 Tamarack Blvd., Columbus OH 43229.

24-27 March 1977
AGGIECON VIII (Texas regional SF conference) at Texas A&M, College Station, Tex. Guests of Honor—Fred and Carol Pohl. Space Station design contest. Registration $4 in advance. Info: Box 5718, College Station TX 77844.

25-27 March 1977
TOTOCON (Kansas regional SF conference) at the Univ. Ramada Inn, Manhattan, KS. Guest of Honor—Joe Haldeman. Registration $5 in advance, $10 at the door. Info: Box 9195, Fort Riley KS 66442.

5-9 July 1977
Crystal Balls and Computers: How to Predict the Future featuring Ben Bova at Rensselaerville, N.Y. Info: Terri Rapoport, Campus Programs Coordinator, The Institute on Man and Science, Rensselaerville NY 12147.

10-14 July 1977
The Future of Education featuring Isaac Asimov at Rensselaerville, N.Y. Info: Terri Rapoport, Campus Programs Coordinator, The Institute on Man and Science, Rensselaerville NY 12147.

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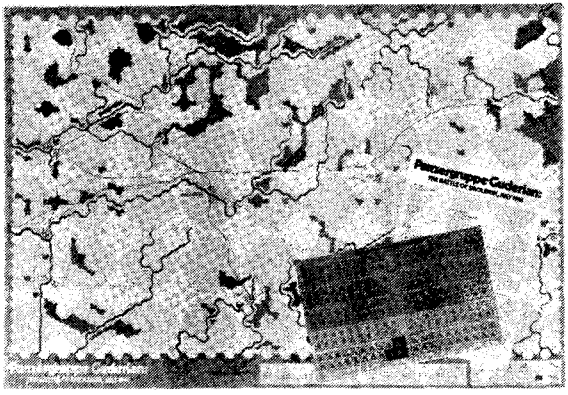

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Next Issue on Sale
March 1, 1977
$9.00 per year in the U.S.A.
$1.00 per copy

· Cover by John Schoenherr

Vol. XCVII, No. 3
MARCH 1977

SCIENCE FICTION
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GUEST EDITORIAL BY
DIANA KING

WHERE ARE YOU, SOCRATES, NOW THAT WE REALLY NEED YOU?

Education, like everything else these days, appears to be in a state of crisis and transition, and a few of the directions in which it might slide are disturbing—at least to me. Take, for example, the increasing emphasis on what I have always thought of as frills rather than skills. Maybe I find this disturbing because I am not a "New Age Person" and am, instead, the product of an educational system that, in theory if not always in practice, stressed such functional goals as competency and skills rather than such modern, "holistic" goals as self-concept development and value clarification. The whole field, it seems to me, is going "psychosocial"—if, in fact, it is going anywhere—and since at the age of thirty-three I would hate to appear moribund in my attitudes, I've tried to analyze why the emphasis on these psychosocial, rather than intellectual, goals disturbs me so much. Why, indeed, does the prospect of schools filled with more and more psychologists, guidance counselors and lay analysts, and fewer and fewer plain old teachers, fill me with so much trepidation?

Perhaps it is because I can envision a future in which the nation is peopled almost entirely with Johnnies who can neither read nor write effectively—let alone think—but who are, on the other hand, entirely "together" Johnnies completely in touch with themselves, their peers, and the social concerns of the day. I may live long enough to find myself surrounded by people who are "whole" in every way but one: they will be incredibly sensitive communicators with absolutely nothing of interest to communicate. Or my fear could be a less complimentary, even more self-centered one: I may simply not "fit" in the future; there I'll be in the year 2000, all alone with my old-fashioned neuroses and inhibitions and intellectual doubts in a world full of self-integrated, value clarified,

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consciousness-altered Gestalt giants.

Or it's possible that what I'm expressing is merely one more manifestation of futurephobia: I just happen to be more afraid of what the "pop" psychologists *will* do to us than I am of nuclear physicists and molecular biologists.

Regardless of my anxiety about the subject, the state of education and its possible course toward the future should be of profound concern to all of us, for the simple reason that we will have to live with its products. My own concern was ardent when I was a student in teachers' college in the early sixties; sporadic during the middle sixties after I had quit being a teacher; and profound only in the last couple of years when I realized my own son was getting such an ineffectual education in the New York City Public School System that he might as well, and did, drop out in favor of some alternative means of preparing himself for later life.

My old ardency was rekindled at a recent Association of Humanistic Psychologists' conference here in New York when I found that most of the people in attendance were professional *educators*. It seems that the pop psychology movement in education has gained a lot of ground since the early sixties when it was making its first tentative appearance in some of my teaching-methods courses. I had naively supposed that I was being sent to cover a convention of *shrinks*, i.e., people who dealt with mental illness, abnormal psychology, or at the least level of insanity, society's mentally walking wounded. And here I was, surrounded instead by teachers and guidance counselors and educators from the U.S. Office of Education who were talking about applying Gestalt psychology and group therapy techniques and psychosynthesis and whatnot to *normal* students in classroom situations. There were also a lot of psychic phenomena floating around at this meeting. Many of the workshops were concerned with abilities previously regarded as the province of parapsychology—and there was in evidence a lot of "Human Potential" type stuff: meditation, chanting of mantras, yoga, biofeedback, altered states of consciousness and other such material as espers' dreams are made of. "*Ong namo guru dev namo*," everyone chanted at the behest of the final speaker. (I confess that this is my clumsy representation of it; he may have been saying something very profound in Hindustani. I would not know.) "Let's focus our energy in one vibration," the speaker invited us, and the man on the platform with him, an honest-to-Campbell guru dressed in white wrappings and turban, helped him lead the chanting. "*Ong namo guru dev namo*," everyone repeated, and my mind flashed back to my high school English teacher, Miss Bly. I tried to picture her among the audience and failed. *My God*, I thought, *these are educators*?

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Is this, then, the future?

The auditorium fills with students, who enter quietly, hands folded before their chests. After a period of meditation, the principal enters, walks on stage, adjusts his turban, and announces that henceforth the cafeteria will offer only vegetarian lunches. Those who insist on meat in their diets will be excused from lunchtime social intercourse activities in order to go home and be fed by their guardians. Then he leads them in the final chant of the day before dismissal: "Ong namo guru dev namo," they chant as they file out of the auditorium. "Ong namo guru dev namo . . ."

No, I don't really think they'll go that far. And even if they do, why am I so appalled at the prospect?

For I *do* think that these "Humanists," as they call themselves, are at least trying to answer an important question that most of us, and particularly those within the present bureaucratically-bound system, seem to be ignoring. The question is, What are we educating people *for*? No, no, semanticists. Not, Why should we educate people at all? But rather, For what do people need an education? What kind of world will they be living in? Is it going to be a world in which reading and writing and arithmetic will even matter? Perhaps it will, in fact, be an overcrowded, computerized world in which a person's need to know the techniques for achieving inner peace will be far greater than his need to know the multiplication tables.

It's just possible that the world has already begun to be that kind of place, and the massive disintegration occurring now in our schools is merely a classic example of an institution's failure to adapt to change. When this happens we call such an institution archaic—and you only have to visit some of New York City's public schools to get a real understanding of "archaism in progress."

Actually, the symptoms of this disintegration are everywhere in the nation; they are only more apparent in the cities because the cities are on the front lines of change. And, of course, because the number of casualties per square mile is more impressive in the cities than it is in the hinterlands. But in case you should doubt that disintegration is taking place, here are some indicators:

Drug and alcohol abuse among students are increasing. So is violence to teachers and other students, and the "perpetrators," as the cops would say, are increasingly younger. Anger, rebellion against any kind of authority, and vandalism are increasing. Drop-out and suspension rates are at an all time high. More and more young people, in fact, are dropping out *permanently*: the suicide rate among students is also increasing. The only thing that does not seem to be increasing is the literacy of our public school graduates. There is evidence that this is decreasing.

As one speaker at the Humanists'

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conference put it, "Those who *brave it* and remain in school are becoming fewer." This speaker also put into perspective something I've suspected for a while now. "For far too many young people school is a hindrance," she said, "and may be detrimental to their well-being." She went on: "Not enough is done to help enrollees cope with the school environment," by which I think she meant, not enough is done to help normal students cope with the ones who are raising hell.

Putting children into many of our schools is akin to sending innocent men to prison where they must cope with other prisoners who are there because they have committed real murder and rape and robbery—not to mention simple mayhem.

I think the Humanist educators I met are right in this respect: putting children into this kind of environment without guidance or support is itself criminal. But I wonder about their answer to the problem. Are more psychosocial services and support systems really such a good idea?

The students at P.S. 109 are attending their Human Adjustment Course. The course relies primarily on peer-group counseling sessions for its effectiveness, and in one such session a disturbing event has occurred. The group leader, a senior student, hastens to report it to his faculty counselor: One of his sophomore charges has revealed during a guided fantasy exercise that he has a violent dislike for his bioenergetics instructor, and the student counselor fears that this antipathy may erupt in actual violent behavior . . .

My own fear that such techniques may produce a network of psychological stoolpigeons may be exaggerated. Peer-group counseling is being done in some schools now with, I'm told, highly beneficial results. And given the state of the schools themselves, I guess I cannot really argue against its necessity. Nor, given the state of our society, can I argue too convincingly against the necessity for many other courses I would have considered "frills" a few years ago. A death education course may actually be necessary for a child whose grandparents are removed from the premises at the first sign of senile decay, whose learning comes largely from a medium which shows a distorted picture of death, and whose parents are unable to talk to him about it because they are unable to face it themselves.

I understand that these things may be beneficial, but I think that their addition to the school curriculum may be simply overloading a system that is already blowing fuses. And to relieve the pressure, courses that are of equal, or more, importance may be thrown out.

As they are presently constituted, our schools are being asked to do too many things for too many people. They were always expected to educate, but now they're supposed to placate the problem children, stimulate the learning disabled, com-

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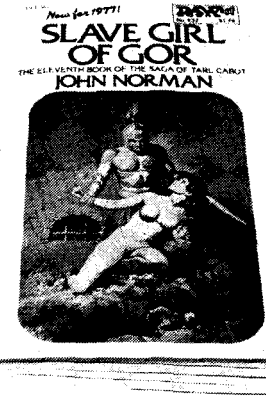

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pensate the disadvantaged, and motivate the ones who are merely bored. To say nothing of de-escalating the violence. All, mind you, in the time it used to take merely to educate and on a budget considerably smaller than that of the Department of Defense. If this were a battle and the enemy were Ignorance, our troops could only be described as battle-fatigued, our weapons hopelessly inadequate, and our strategy comparable to the Maginot Line in its effectiveness. It's no wonder some of our teachers are turning to meditation and chanting; whether it works for students or not, the teachers need the hope such techniques offer as badly as any soldier ever needed a chaplain.

My answer is admittedly more visceral and less likely to happen: Tear the Institution down and start over again.

We need a completely different, if not new, approach to educating large numbers of people. Education has long been officially separated from religion in this country. Maybe the time has come to separate it from government as well. Perhaps education could be done more efficiently if it were a private matter between a parent and his child's teaching practitioner, with institutions involved only in the case of a parent's inability to provide. Simple skills can actually be taught to normal children in a relatively short period of time—if the attention and effort is concentrated. Television, computer terminals, videophones and other modern technological wonders could probably be used to teach skills just as effectively—and possibly more effectively—than our schools are presently capable of doing. As for peer-group contact, personality integration, and other such psychosocial concerns, they could probably be handled more effectively in other settings too.

The old-fashioned tutorial method should not be considered obsolete just because it's been around the longest, and not just for skill training either. I'm willing to admit that the written word may someday become so unnecessary that people will no longer need to read or write. But the children of the future *will* need one ability just as badly as those of the present. They will need the ability to *think*.

If we develop that ability in the future as ineffectively as we seem to be doing now, it may not be much pleasure to reach the year 2000. And you don't need psychologists—Humanistic or otherwise—to accomplish it—nor, for that matter, schools. All you need is a teacher who is able to think for himself and is allowed to require it of those he teaches. And maybe an olive grove.

Otherwise—

The students sit quietly as their Aural Ed Instructor reads a passage from an old book he remembers from his own far-off youth: "For if you think that by putting men to death you will restrain any one from upbraiding

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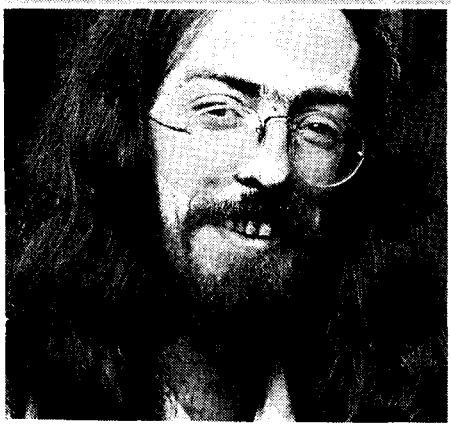
you because you do not live well, you are much mistaken; for this method of escape is neither possible nor honorable, but that other is most honorable and most easy, not to pùt a check upon others, but for a man to take heed to himself, how he may be most perfect." This was said by a man named Socrates, he tells them, and then asks for volunteers to paraphrase Socrates' meaning. No one volunteers. He then asks them to repeat what he has read, which they are able to do without error. Their listening skills are highly developed. But when he asks again whether anyone can understand what Socrates was talking about, no one can . . .



Spider Robinson

With the Bay of Fundy in his back yard, "372 books on my desk I've gotta read, five different stories I'm trying to write, and two novels I'm bogged down in the middle of," Spider Robinson has pretty nearly everything a science fiction writer could want, except, perhaps, indoor plumbing. He also has an estimated thousand songs he's written, and will play on request with the aid of an ancient Gibson guitar.

Back in the summer of '72, fans voted Spider, along with Lisa Tuttle, the John W. Campbell Best New Writer award, given at the Discon II, the 32nd World Science Fiction Convention. Since then, from his typewriter has come an amazing set of science fiction book reviews—the funniest if possibly not the most profound of all time—and just about enough short fiction to keep the Nova Scotian wolves from the front door. Now, the very first Spider Robinson novel is due out momentarily, *Telempath,* based on an earlier story in Analog, "By Any Other Name." Also on the way soon is a collection of Spider's "Callahan's Bar" stories. The fans of five years ago thought there'd be a real, live Spiderman in our future, and by golly if they weren't right.

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stardance

When humankind expands its habitat into the space environment, we will take with us all the things that make us human—including the need for art.

Spider and Jeanne Robinson

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John Schoenherr

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I can't really say that I knew her, certainly not the way Seroff knew Isadora. All I know of her childhood and adolescence are the anecdotes she chanced to relate in my hearing—just enough to make me certain that all three of the contradictory biographies on the current best-seller list are fictional. All I know of her adult life are the hours she spent in my presence and on my monitors—more than enough to tell me that every newspaper account I've seen is fictional. Carrington probably believed he knew her better than I, and in a limited sense he was correct—but he would never have written of it, and now he is dead.

But I was her video man, since the days when you touched the camera with your hands, and I knew her backstage: a type of relationship like no other on Earth or off it. I don't believe it can be described to anyone not of the profession—you might think of it as somewhere between coworkers and combat buddies. I was with her the day she came to Skyfac, terrified and determined, to stake her life upon a dream. I watched her work and worked with her for that whole two months, through endless rehearsals, and I have saved every tape and they are not for sale.

And, of course, I saw the Stardance. I was there, I taped it.

I guess I can tell you some things about her.

To begin with, it was not, as Cahill's *Shara* and Von Derski's *Dance Unbound: The Creation of New Modern* suggest, a lifelong fascination with space and space travel that led her to become the race's first zero-gravity dancer. Space was a means to her, not an end, and its vast empty immensity scared her at first. Nor was it, as Melberg's hardcover tabloid *The Real Shara Drummond* claims, because she lacked the talent to make it as a dancer on Earth. If you think free-fall dancing is easier than conventional dance, you try it. Don't forget your dropsickness bag.

But there is a grain of truth in Melberg's slander, as there is in all the best slanders. She could *not* make it on Earth—but not through lack of talent.

I first saw her in Toronto in July of 1984. I headed Toronto Dance Theater's video department at that time, and I hated every minute of it. I hated everything in those days. The schedule that day called for spending the entire afternoon taping students, a waste of time and tape which I hated more than anything except the phone company. I hadn't seen the year's new crop yet, and was not eager to. I love to watch dance done well—the efforts of a tyro are usually as pleasing to me as a first-year violin student in the next apartment is to you.

My leg was bothering me even more than usual as I walked into the studio. Norrey saw my face and left a group of young hopefuls to come over. "Charlie . . . ?"

"I know, I know. They're tender

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fledglings, Charlie, with egos as fragile as an Easter egg in December. Don't bite them, Charlie. Don't even bark at them if you can help it, Charlie."

She smiled. "Something like that. Leg?"

"Leg."

Norrey Drummond is a dancer who gets away with looking like a woman because she's small. There's about a hundred and fifteen pounds of her, and most of it is heart. She stands about five-four, and is perfectly capable of seeming to tower over the tallest student. She has more energy than the North American Grid, and uses it as efficiently as a vane pump (have you ever studied the principle of a standard piston-type pump? Go look up the principle of a vane pump. I wonder what the original conception of *that* notion must have been like, as an emotional experience). There's a signaturelike uniqueness to her dance, the only reason I can see why she got so few of the really juicy parts in company productions until Modern gave way to New Modern. I liked her because she didn't pity me.

"It's not only the leg," I admitted. "I hate to see the tender fledglings butcher your choreography."

"Then you needn't worry. The piece you're taping today is by . . . one of the students."

"Oh, fine. I knew I should have called in sick." She made a face. "What's the catch?"

"Eh?"

"Why did the funny thing happen to your voice just as you got to 'one of my students'?"

She blushed. "Dammit, she's my sister."

My eyebrows rose. "She must be good then."

"Why thank you, Charlie."

"Bullshit. I give compliments right-handed or not at all—I'm not talking about heredity. I mean that you're so hopelessly ethical you'd bend over backward to avoid nepotism. For you to give your own sister a feature like that, she must be *terrific*."

"Charlie, she is," Norrey said simply.

"We'll see. What's her name?"

"Shara." Norrey pointed her out, and I understood the rest of the catch. Shara Drummond was ten years younger than her sister—and seven inches taller, with thirty or forty more pounds. I noted absently that she was stunningly beautiful, but it didn't deter my dismay—in her best years, Sophia Loren could never have become a modern dancer. Where Norrey was small, Shara was big, and where Norrey was big, Shara was bigger. If I'd seen her on the street I might have whistled appreciatively—but in the studio I frowned.

"My god, Norrey, she's enormous."

"Mother's second husband was a football player," she said mournfully. "She's awfully good."

"If she *is* good, that *is* awful. Poor

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girl. Well, what do you want me to do?"

"What makes you think I want you to do anything?"

"You're still standing here."

"Oh. I guess I am. Well . . . have lunch with us, Charlie?"

"Why?" I knew perfectly well why, but I expected a polite lie.

Not from Norrey Drummond. "Because you two have something in common, I think."

I paid her honesty the compliment of not wincing. "I suppose we do."

"Then you will?"

"Right after the session."

She twinkled and was gone. In a remarkably short time she had organized the studio full of wandering, chattering young people into something that resembled a dance ensemble if you squinted. They warmed up during the twenty minutes it took me to set up and check out my equipment. I positioned one camera in front of them, one behind, and kept one in my hands for walk-around close-up work. I never triggered it.

There's a game you play in your mind. Every time someone catches or is brought to your attention, you begin making guesses about them. You try to extrapolate their character and habits from their appearance. Him? Surly, disorganized—leaves the cap off the toothpaste and drinks boilermakers. Her? Art student type, probably uses a diaphragm and writes letters in a stylized calligraphy of her own invention. Them? They look like schoolteachers from Miami, probably here to see what snow looks like, attend a convention. Sometimes I come pretty close. I don't know how I typecast Shara Drummond, in those first twenty minutes. The moment she began to dance, all preconceptions left my mind. She became something elemental, something unknowable, a living bridge between our world and the one the Muses live in.

I know, on an intellectual and academic level, all there is to know about dance, and I could not categorize or classify or even really comprehend the dance she danced that afternoon. I saw it, I even appreciated it, but I was not equipped to understand it. My camera dangled from the end of my arm, next to my jaw. Dancers speak of their "center," the place their motion centers around, often quite near the physical center of gravity. You strive to "dance from your center," and the "contraction-and-release" idea which underlies much of Modern dance depends on the center for its focus of energy. Shara's center seemed to move about the room under its own power, trailing limbs that attached to it by choice rather than necessity. What's the word for the outermost part of the sun, the part that still shows in an eclipse? Corona? That's what her limbs were: four lengthy tongues of flame that followed the center in its eccentric, whirling orbit, writhing fluidly around its surface. That the lower two frequently con-

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tacted the floor seemed coincidental—indeed the other two touched the floor nearly as regularly.

There were other students dancing. I know this because the two automatic videocameras, unlike me, did their job and recorded the piece as a whole. It was called *Birthing*, and depicted the formation of a galaxy that ended up resembling Andromeda. It was only vaguely accurate, literally, but it wasn't intended to be. Symbolically, it felt like the birth of a galaxy.

In retrospect. At the time I was aware only of the galaxy's heart: Shara. Students occluded her from time to time, and I simply never noticed. It hurt to watch her.

If you know anything about dance, this must all sound horrid to you. A dance about a *nebula*? I know, I know. It's a ridiculous notion. And it worked. In the most gut-level, cellular way it worked—save only that Shara was too good for those around her. She did not belong in that eager crew of awkward, half-trained apprentices. It was like listening to the late Stephen Wonder trying to work with a pick-up band in a Montreal bar.

But that wasn't what hurt.

Le Maintenant was shabby, but the food was good and the house brand of grass was excellent. Show a Diner's Club card in there and they'd show you a galley full of dirty dishes. It's gone now. Norrey and Shara

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declined a toke, but in my line of work it helps. Besides, I needed a few hits. How to tell a lovely lady her dearest dream is hopeless?

I didn't need to ask Shara to know that her dearest dream was to dance. More: to dance professionally. I have often speculated on the motives of the professional artist. Some seek the narcissistic assurance that others will actually pay cash to watch or hear them. Some are so incompetent or disorganized that they can support themselves in no other way. Some have a message which they feel needs expressing. I suppose most artists combine elements of all three. This is no complaint—what they do for us is necessary. We should be grateful that there *are* motives.

But Shara was one of the rare ones. She danced because she needed to. She needed to say things which could be said in no other way, and she needed to take her meaning and her living from the saying of them. Anything else would have demeaned and devalued the essential statement of her dance. I know this, from watching that one dance.

Between toking up and keeping my mouth full and then toking again (a mild amount to offset the slight down that eating brings), it was over half an hour before I was required to say anything, beyond an occasional grunted response to the luncheon chatter of the ladies. As the coffee arrived, Shara looked me square in the eye and said, "Do you talk Charlie?"

She was Norrey's sister, all right.

"Only inanities."

"No such thing. Inane people, maybe."

"Do you enjoy dancing, Miss Drummond?"

She answered seriously. "Define 'enjoy'."

I opened my mouth and closed it, perhaps three times. You try it.

"And for God's sake tell me why you're so intent on not talking to me. You've got me worried."

"Shara!" Norrey looked dismayed.

"Hush. I want to know."

I took a crack at it. "Shara, before he died I had the privilege of meeting Bertram Ross. I had just seen him dance. A producer who knew and liked me took me backstage, the way you take a kid to see Santa Claus. I had expected him to look even older offstage, at rest. He looked younger, as if that incredible motion of his was barely in check. He talked to me. After a while I stopped opening my mouth, because nothing ever came out."

She waited, expecting more. Only gradually did she comprehend the compliment and its dimension. I had assumed it would be obvious. Most artists *expect* to be complimented. When she did twig, she did not blush or simper. She did not cock her head and say, "Oh, come on." She did not say, "You flatter me." She did not look away.

She nodded slowly and said, "Thank you, Charlie. That's worth a

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lot more than idle chatter." There was a suggestion of sadness in her smile, as if we shared a bitter joke.

"You're welcome."

"For heaven's sake, Norrey, what are you looking so upset about?"

The cat now had Norrey's tongue.

"She's disappointed in me," I said. "I said the wrong thing."

"That was the wrong thing?"

"It should have been, 'Miss Drummond, I think you ought to give up dancing.' "

"It should have been, '*Shara,* I think you ought' . . . *what*?"

"Charlie," Norrey began.

"I was supposed to tell you that we can't all be professional dancers, that they also surf who only sand and wade. Shara, I was supposed to tell you to dump the dance—before it dumps you."

In my need to be honest with her, I had been more brutal than was necessary, I thought. I was to learn that bluntness never dismayed Shara. She demanded it.

"Why you?" was all she said.

"We're inhabiting the same vessel, you and I. We've both got an itch that our bodies just won't let us scratch."

Her eyes softened. "What's your itch?"

"The same as yours."

"Eh?"

"The man was supposed to come and fix the phone on Thursday. My roommate Karen and I had an all-day rehearsal. We left a note. Mister telephone man, we had to go out, and we sure couldn't call you, heh heh. Please get the key from the concierge and come on in; the phone's in the bedroom. The phone man never showed up. They never do." My hands seemed to be shaking. "We came home up the back stairs from the alley. The phone was still dead, but I never thought to take down the note on the front door. I got sick the next morning. Cramps. Vomiting. Karen and I were just friends, but she stayed home to take care of me. I suppose on a Friday night the note seemed even more plausible. He slipped the lock with a piece of plastic, and Karen came out of the kitchen as he was unplugging the stereo. He was so indignant he shot her. Twice. The noise scared him; by the time I got there he was halfway out the door. He just had time to put a slug through my hip joint, and then he was gone. They never got him. They never even came to fix the phone." My hands were under control now. "Karen was a damned good dancer, but I was better. In my head, I still am."

Her eyes were round. "You're not Charlie . . . Charles *Armstead.*"

I nodded.

"Oh my God. So *that*'s where you went."

I was shocked by how she looked. It brought me back from the cold and windy border of self-pity. I began a little to pity her. I should have guessed the depth of her empathy. And in the way that really

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mattered, we were too damned alike—we *did* share the same bitter joke. I wondered why I had wanted to shock her.

"They couldn't repair the joint?" she asked softly.

"I can walk splendidly. Given a strong enough motivation, I can even run short distances. I can't dance worth a damn."

"So you became a video man."

"Three years ago. People who know both video and dance are about as common as garter belts these days. Oh, they've been taping dance since the '70s—with the imagination of a network news cameraman. If you film a stage play with two cameras in the orchestra pit, is it a movie?"

"You do for dance what the movie camera did for drama?"

"Pretty fair analogy. Where it breaks down is that dance is more analogous to music than to drama. You can't stop and start it, or go back and retake a scene that didn't go in the can right, or reverse the chronology to get a tidy shooting schedule. The event happens and you record it. What I am is what the record industry pays top dollar for—a mixman with savvy enough to know which ax is wailing at the moment and mike it high—and the sense to have given the heaviest dudes the best mikes. There are a few others like me. I'm the best."

She took it the way she had the compliment to herself—at face value. Usually when I say things like that, I don't give a damn what reaction I get, or, I'm being salty and hoping for outrage. But I was pleased at her acceptance, pleased enough to bother me. A faint irritation made me go brutal again, *knowing it wouldn't* work. "So what all this leads to is that Norrey was hoping I'd suggest some similar form of sublimation for you. Because I'll make it in dance before you will."

She stubborned up. "I don't buy that, Charlie. I know what you're talking about, I'm not a fool, but I think I can beat it."

"Sure you will. *You're too damned big, lady.* You've got tits like both halves of a prize honeydew melon and an ass that any actress in Hollywood would sell her parents for and in Modern dance that makes you d-e-d dead, you haven't got a chance. Beat it? You'll beat your head in first, how'm I doing, Norrey?"

"For Christ's sake, Charlie!"

I softened. I can't work Norrey into a tantrum—I like her too much. "I'm sorry, hon. My leg's giving me the mischief, and I'm stinkin' mad. She *ought* to make it—and she won't. She's your sister, and so it saddens you. Well I'm a total stranger, and it enrages me."

"How do you think it makes me feel?" Shara blazed, startling us both. I hadn't known she had so much voice. "So you want me to pack it in and rent me a camera, huh, Charlie? Or maybe sell apples outside the studio?" A ripple ran up her jaw. "Well I will be damned by all the

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gods in southern California before I'll pack it in. God gave me the large economy size, but there is not a surplus pound on it and it fits me like a glove and I can by Jesus *dance* it and I will. You may be right—I may beat my head in first. But I will get it done." She took a deep breath. "Now I thank you for your kind intentions, Char . . . Mister Armst . . . oh shit." The tears came and she left hastily, spilling a quarter-cup of cold coffee on Norrey's lap.

"Charlie," Norrey said through clenched teeth, "why do I like you so much?"

"Dancers are dumb." I gave her my handkerchief.

"Oh." She patted at her lap awhile. "How come you like me?"

"Video men are smart."

"Oh."

I spent the afternoon in my apartment, reviewing the footage I'd shot that morning, and the more I watched, the madder I got.

Dance requires intense motivation at an extraordinarily early age—a blind devotion, a gamble on the as-yet-unrealized potentials of heredity and nutrition. You can begin, say, classical ballet training at age six—and at fourteen find yourself broad-shouldered, the years of total effort utterly wasted. Shara had set her sights on Modern dance—and found out too late that God had dealt her the body of a woman.

She was not fat—you have seen her. She was tall, big-boned tall, and

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on that great frame was built a rich, ripely female body. As I ran and reran the tapes of *Birthing*, the pain grew in me until I even forgot the ever present aching of my own leg. It was like watching a supremely gifted basketball player who stood four feet tall.

To make it in Modern dance, it is essential to get into a company. You cannot be seen unless you are visible. Norrey had told me, on the walk back to the studio, of Shara's efforts to get into a company—and I could have predicted nearly every word.

"Merce *Cunningham* saw her dance, Charlie. Martha Graham saw her dance, just before she died. Both of them praised her warmly, for her choreography as much as for her technique. Neither offered her a position. I'm not even sure I blame them—I can sort of understand."

Norrey could understand all right. It was her own defect magnified a hundredfold: uniqueness. A company member must be capable of excellent solo work—but she must also be able to blend into group effort, in ensemble work. Shara's very uniqueness made her virtually useless as a company member. She could not help but draw the eye.

And once drawn, the male eye at least would never leave. Modern dancers must sometimes work nude these days, and it is therefore meet that they have the body of a fourteen-year-old boy. We may have ladies dancing with few or no clothes on up here, but by God it is Art. An actress or a musician or a singer or a painter may be lushly endowed, deliciously rounded—but a dancer must be nearly as sexless as a high fashion model. Perhaps God knows why. Shara could not have purged her dance of her sexuality even if she had been interested in trying, and as I watched her dance on my monitor and in my mind's eye, I knew she was not.

Why did her genius have to lie in the only occupation besides model and nun in which sexiness is a liability? It broke my heart, by empathic analogy.

"It's no good at all, is it?"

I whirled and barked. "Dammit, you made me bite my tongue."

"I'm sorry." She came from the doorway into my living room. "Norrey told me how to find the place. The door was ajar."

"I forgot to shut it when I came home."

"You leave it open?"

"I've learned the lesson of history. No junkie, no matter how strung out he is, will enter an apartment with the door ajar and the radio on. Obviously there's someone home. And you're right, it's no damn good at all. Sit down."

She sat on the couch. Her hair was down now, and I liked it better that way. I shut off the monitor and popped the tape, tossing it on a shelf.

"I came to apologize. I shouldn't have blown up at you at lunch. You were trying to help me."

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"You had it coming. I imagine by now you've built up quite a head of steam."

"Five years worth. I figured I'd start in the States instead of Canada. Go farther faster. Now I'm back in Toronto and I don't think I'm going to make it here either. You're right, Mr. Armstead—I'm too damned big. Amazons don't dance."

"It's still Charlie. Listen, something I want to ask you. That last gesture, at the end of *Birthing*—what was that? I thought it was a beckoning, Norrey says it was a farewell, and now that I've run the tape it looks like a yearning, a reaching out."

"Then it worked."

"Pardon?"

"It seemed to me that the birth of a galaxy called for all three. They're so close together in spirit it seemed silly to give each a separate movement."

"Mmm." Worse and worse. Suppose Einstein had aphasia. "Why couldn't you have been a rotten dancer? That'd just be irony. This," I pointed to the tape, "is high tragedy."

"Aren't you going to tell me I can still dance for myself?"

"No. For you that'd be worse than not dancing at all."

"My god, you're perceptive. Or am I that easy to read?"

I shrugged.

"Oh Charlie," she burst out, "what am I going to do?"

"You'd better not ask me that." My voice sounded funny.

"Why not?"

"Because I'm already two-thirds in love with you. And because you're not in love with me and never will be. And so that is the sort of question you shouldn't ask me."

It jolted her a little, but she recovered quickly. Her eyes softened, and she shook her head slowly. "You even know why I'm not, don't you?"

"And why you won't be."

I was terribly afraid she was going to say, "Charlie, I'm sorry." But she surprised me again. What she said was, "I can count on the fingers of one foot the number of grown-up men I've ever met, I'm grateful for you. I guess ironic tragedies come in pairs?"

"Sometimes."

"Well, now all I have to do is figure out what to do with my life. That should kill the weekend."

"Will you continue your classes?"

"Might as well. It's never a waste of time to study. Norrey's teaching me things."

All of a sudden my mind started to percolate. Man is a rational animal, right? Right? "What if I had a better idea?"

"If you've got another idea, it's better. Speak."

"Do you have to have an audience? I mean, does it have to be *live*?"

"What do you mean?"

"Maybe there's a back way in. Home video machines are starting to

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sell—once people understood they could collect old movies and such like they do records, it was just a matter of making it cheap enough for the traffic to bear. It's just about there—you know, TDT's already thinking of entering the market, and the Graham company has."

"So?"

"So suppose we go freelance? You and me? You dance it and I'll tape it: a straight business deal. I've got a few connections, and maybe I can get more. I could name you ten acts in the music business right now that never go on tour—just record and record. Why don't you bypass the structure of the dance companies and take a chance on the public? Maybe word of mouth could. . . ."

Her face was beginning to light up like a jack-o'-lantern. "Charlie, do you think it could work? Do you really think so?"

"I don't think it has a snowball's chance." I crossed the room, opened up the beer fridge, took out the snowball I keep there in the summer and tossed it at her. She caught it, but just barely, and when she realized what it was, she burst out laughing. "I've got just enough faith in the idea to quit working for TDT and put my time into it. I'll invest my time, my tape, my equipment and my savings. Ante up."

She tried to get sober, but the snowball froze her fingers and she broke up again. "A snowball in July. You madman. Count me in. I've got a little money saved. And . . . and I guess I don't have much choice, do I?"

"I guess not."

The next three years were some of the most exciting years of my life, of both our lives. While I watched and taped, Shara transformed herself from a potentially great dancer into something truly awesome. She did something I'm not sure I can explain.

She became dance's analogy of the jazzman.

Dance was, for Shara, self-expression, pure and simple, first, last and always. Once she freed herself of the attempt to fit into the world of company dance, she came to regard choreography per se as an *obstacle* to her self-expression, as a preprogrammed rut, inexorable as a script and as limiting. And so she devalued it.

A jazzman may blow *Night In Tunisia* for a dozen consecutive nights, and each evening will be a different experience, as he interprets and reinterprets the melody according to his mood of the moment. Total unity of artist and his art: spontaneous creation. The melodic starting point distinguishes the result from pure anarchy.

In just this way Shara devalued preperformance choreography to a starting point, a framework on which to build whatever the moment demanded, and then jammed around it. She learned in those three busy years to dismantle the interface between herself and her dance.

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Dancers have always tended to sneer at improv dancing, even while they practiced it, in the studio, for the looseness it gave. They failed to see that *planned* improv, improv around a theme fully thought out in advance, was the natural next stop in dance. Shara took the step. You must be very, very good to get away with that much freedom. She was good enough.

There's no point in detailing our professional fortunes over those three years. We worked hard, we made some magnificent tapes, and we couldn't sell them for paperweights. A home video cassette industry indeed formed—and they knew as much about Modern dance as the record industry knew about the blues when *they* started. The big outfits wanted credentials, and the little outfits wanted cheap talent. Finally we even got desperate enough to try the schlock houses—and learned what we already knew. They didn't have the distribution, the prestige or the technical specs for the critics to pay any attention to them. Word-of-mouth advertising is like a gene pool—if it isn't a certain minimum size to start with, it doesn't get anywhere. "Spider" John Koerner is an incredibly talented musician and songwriter who has been making and selling his own records since 1972. How many of you have ever heard of him?

In May of 1987 I opened my mailbox in the lobby and found the letter from VisuEnt Inc., terminating our option with deepest sorrow and no severance. I went straight over to Shara's apartment, and my leg felt like the bone marrow had been replaced with thermite and ignited. It was a very long walk.

She was working on *Weight Is A Verb* when I got there. Converting her big living room into a studio had cost time, energy, skullsweat and a fat bribe to the landlord, but it was cheaper than renting time in a studio, considering the sets we wanted. It looked like high mountain country that day, and I hung my hat on a fake alder when I entered.

She flashed me a smile and kept moving, building up to greater and greater leaps. She looked like the most beautiful mountain goat I ever

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saw. I was in a foul mood and I wanted to kill the music (McLaughlin and Miles together, leaping some themselves), but I never could interrupt Shara when she was dancing. She built it gradually, with directional counterpoint, until she seemed to hurl herself into the air, stay there until she was damned good and ready, and then hurl herself down again. Sometimes she rolled when she hit and sometimes she landed on her hands, and always the energy of falling was transmuted into something instead of being absorbed. It was total energy output, and by the time she was done I had calmed down enough to be almost philosophical about our mutual professional ruin.

She ended up collapsed in upon herself, head bowed, exquisitely humbled in her attempt to defy gravity. I couldn't help applauding. It felt corny, but I couldn't help it.

"Thank you, Charlie."

"I'll be damned. Weight *is* a verb. I thought you were crazy when you told me the title."

"It's one of the strongest verbs in dance—and you can make it do *anything*."

"Almost anything."

"Eh?"

"VisuEnt gave us our contract back."

"Oh." Nothing showed in her eyes, but I knew what was behind them. "Well, who's next on the list?"

"There is no one left on the list."

"*Oh*." This time it showed. "Oh."

"We should have remembered. Great artists are never honored in their own lifetime. What we ought to do is drop dead—then we'd be all set."

In my way I was trying to be strong for her, and she knew it and tried to be strong for me.

"Maybe what we should do is go into death insurance, for artists," she said. "We pay the client premiums against a controlling interest in his estate, and we insure that he'll die."

"We can't lose. And if he becomes famous in his lifetime he can buy out."

"Terrific. Let's stop this before I laugh myself to death."

"Yeah."

She was silent for a long time. My own mind was racing efficiently, but the transmission seemed to be blown—it wouldn't *go* anywhere. Finally she got up and turned off the music machine, which had been whining softly ever since the tape ended. It made a loud *click*.

"Norrey's got some land in Prince Edward Island," she said, not meeting my eyes. "There's a house."

I tried to head her off with the punchline from the old joke about the kid shoveling out the elephant cage in the circus whose father offers to take him back and set him up with a decent job. "What? And leave show business?"

"Screw show business," she said softly. "If I went out to PEI now, maybe I could get the land cleared and plowed in time to get a garden

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in." Her expression changed. "How about you?"

"Me? I'll be okay. TDT asked me to come back."

"That was six months ago."

"They asked again. Last week."

"And you said no. Moron."

"Maybe so, maybe so."

"The whole damn thing was a waste of time. All that time. All that energy. All that work. I might as well have been farming in PEI—by now the soil'd be starting to bear well. What a waste, Charlie, what a stinking waste."

"No, I don't think so, Shara. It sounds glib to say that 'nothing is wasted,' but—well, it's like that dance you just did. Maybe you can't beat gravity—but it surely is a beautiful thing to *try*."

"Yeah, I know. Remember the Light Brigade. Remember the Alamo. They tried." She laughed, a bitter laugh.

"Yes, and so did Jesus of Nazareth. Did you do it for material reward, or because it needed doing? If nothing else we now have several hundred thousand feet of the most magnificent dance recordings on tape, commercial value zero, real value incalculable, and by me that is no waste. It's over now, and we'll both go do the next thing, but it was *not a waste*." I discovered that I was shouting, and stopped.

She closed her mouth. After a while she tried a smile. "You're right, Charlie. It wasn't waste. I'm a better dancer than I ever was."

"Damn right. You've transcended choreography."

She smiled ruefully. "Yeah. Even Norrey thinks it's a dead end."

"It is *not* a dead end. There's more to poetry than haiku and sonnets. Dancers don't *have* to be robots, delivering memorized lines with their bodies."

"They do if they want to make a living."

"We'll try again in a few years. Maybe they'll be ready then."

"Sure. Let me get us some drinks."

I slept with her that night, for the first and last time. In the morning I broke down the set in the living room while she packed. I promised to write. I promised to come and visit when I could. I carried her bags down to the car, and stowed them inside. I kissed her and waved goodbye. I went looking for a drink, and at four o'clock the next morning a mugger decided I looked drunk enough and I broke his jaw, his nose and two ribs, and then sat down on him and cried. On Monday morning I showed up at the studio with my hat in my hand and a mouth like a bus-station ashtray and crawled back into my old job. Norrey didn't ask any questions. What with rising food prices, I gave up eating anything but bourbon, and in six months I was fired. It went like that for a long time.

I never did write to her. I kept getting bogged down after "Dear Shara . . ."

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When I got to the point of selling my video equipment for booze, a relay clicked somewhere and I took stock of myself. The stuff was all the life I had left, and so I went to the local AlAnon instead of the pawn shop and got sober. After a while my soul got numb, and I stopped flinching when I woke up. A hundred times I began to wipe the tapes I still had of Shara—she had copies of her own—but in the end I could not. From time to time I wondered how *she* was doing, and I could not bear to find out. If Norrey heard anything, she didn't tell me about it. She even tried to get me my job back a third time, but it was hopeless. Reputation can be a terrible thing once you've blown it. I was lucky to land a job with an educational TV station in New Brunswick.

It was a long couple of years.

Vidphones were coming out by 1990 and I had breadboarded one of my own without the knowledge or consent of the phone company, which I still hated more than anything. When the peanut bulb I had replaced the damned bell with started glowing softly on and off one evening in June, I put the receiver on the audio pickup and energized the tube, in case the caller was also equipped. "Hello?"

She was. When Shara's face appeared, I got a cold cube of fear in the pit of my stomach, because I had quit seeing her face everywhere when I quit drinking, and I had been thinking lately of hitting the sauce again. When I blinked and she was still there, I felt a little better and tried to speak. It didn't work.

"Hello, Charlie. It's been a long time."

The second time it worked. "Seems like yesterday. Somebody else's yesterday."

"Yes, it does. It took me *days* to find you. Norrey's in Paris, and no one else knew where you'd gone."

"Yeah. How's farming?"

"I . . . I've put that away, Charlie. It's even more creative than dancing, but it's not the same."

"Then what *are* you doing?"

"Working."

"*Dancing*?"

"Yes. Charlie, I need you. I mean, I have a job for you. I need your cameras and your eye."

"Never mind the qualifications. Any kind of need will do. *Where are you?* When's the next plane there? Which cameras do I pack?"

"New York, an hour from now, and none of them. I didn't mean 'your cameras' literally—unless you're using GLX-5000s and a Hamilton Board lately."

I whistled. It hurt my mouth. "Not on my budget. Besides, I'm old fashioned—I like to hold 'em with my hands."

"For this job you'll use a Hamilton, and it'll be a twenty input Masterchrome, brand new."

"You grew poppies on that farm? Or just struck diamonds with the roto-tiller?"

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"You'll be getting paid by Bryce Carrington."

I blinked.

"Now will you catch that plane so I can tell you about it? The New Age, ask for the Presidential Suite."

"The hell with the plane, I'll walk. Quicker." I hung up.

According to the *Time* magazine in my dentist's waiting room, Bryce Carrington was the genius who had become a multimillionaire by convincing a number of giants of industry to underwrite Skyfac, the great orbiting complex that kicked the bottom out of the crystals market. As I recalled the story, some rare poliolike disease had wasted both his legs and put him in a wheelchair. But the legs had lost strength, not function—in lessened gravity, they worked well enough. So he created Skyfac, establishing mining crews on Luna to supply it with cheap raw materials, and lived in orbit under reduced gravity. His picture made him look like a reasonably successful author (as opposed to writer). Other than that I knew nothing about him. I paid little attention to news and none at all to space news.

The New Age was *the* hotel in New York in those days, built on the ruins of the Sheraton. Ultraefficient security, bulletproof windows, carpet thicker than the outside air, and a lobby of an architectural persuasion that John D. MacDonald once called "Early Dental Plate." It stank of money. I was glad I'd made the effort to locate a necktie, and I wished I'd shined my shoes. An incredible man blocked my way as I came in through the airlock. He moved and was built like the toughest, fastest bouncer I ever saw, and he dressed and acted like God's butler. He said his name was Perry. He asked if he could help me, as though he didn't think so.

"Yes, Perry. Would you mind lifting up one of your feet?"

"Why?"

"I'll bet twenty dollars you've shined your soles."

Half his mouth smiled, and he didn't move an inch. "Whom did you wish to see?"

"Shara Drummond."

"Not registered."

"The Presidential Suite."

"Oh." Light dawned. "Mister Car-

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rington's lady. You should have said so. Wait here, please." While he phoned to verify that I was expected, keeping his eye on me and his hand near his pocket, I swallowed my heart and rearranged my face. It took some time. So that was how it was. All right then. That was how it was.

Perry came back and gave me the little button-transmitter that would let me walk the corridors of the New Age without being cut down by automatic laser-fire, and explained carefully that it would blow a largish hole in me if I attempted to leave the building without returning it. From his manner I gathered that I had just skipped four grades in social standing. I thanked him, though I'm damned if I knew why.

I followed the green fluorescent arrows that appeared on the bulbless ceiling, and came after a long and scenic walk to the Presidential Suite. Shara was waiting at the door, in something like an angel's pajamas. It made all that big body look delicate. "Hello, Charlie."

I was jovial and hearty. "Hi, babe. Swell joint. How've you been keeping yourself?"

"I haven't been."

"Well, how's Carrington been keeping you, then?" Steady, boy.

"Come in, Charlie."

I went in. It looked like where the Queen stayed when she was in town, and I'm sure she enjoyed it. You could have landed an airplane in the living room without waking anyone in the bedroom. It had two pianos. Only one fireplace, barely big enough to barbecue a buffalo—you have to scrimp somewhere, I guess. Roger Kellaway was on the quadio, and for a wild moment I thought he was actually in the suite, playing some unseen third piano. So this was how it was.

"Can I get you something, Charlie?"

"Oh, sure. Hash oil, Tangier Supreme. Dom Perignon for the pipe."

Without cracking a smile she went to a cabinet, which looked like a midget cathedral, and produced precisely what I had ordered. I kept my own features impassive and lit up. The bubbles tickled my throat, and the rush was exquisite. I felt myself relaxing, and when we had passed the narghile's mouthpiece a few times I felt her relax. We looked at each other then—really looked at each other—then at the room around us and then at each other again. Simultaneously we roared with laughter, a laughter that blew all the wealth out of the room and let in richness. Her laugh was the same whooping, braying belly laugh I remembered so well, an un-self-conscious and lusty laugh, and it reassured me tremendously. I was so relieved I couldn't stop laughing myself, and that kept *her* going, and just as we might have stopped she pursed her lips and blew a stuttered arpeggio. There's an old recording called the *Spike Jones Laughing Record,* where the tuba player tries to

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play "The Flight Of The Bumblebee" and falls down laughing, and the whole band breaks up and horselaughs for a full two minutes, and every time they run out of air the tuba player tries another flutter and roars and they all break up again, and once when Shara was blue I bet her ten dollars that she couldn't listen to that record without at least giggling and I won. When I understood now that she was quoting it, I shuddered and dissolved into great whoops of new laughter, and a minute later we had reached the stage where we literally laughed ourselves out of our chairs and lay on the floor in agonies of mirth, weakly pounding the floor and howling. I take that laugh out of my memory now and then and rerun it—but not often, for such records deteriorate drastically with play.

At last we dopplered back down to panting grins, and I helped her to her feet.

"What a perfectly dreadful place." I said, still chuckling.

She glanced around and shuddered. "Oh God, it *is*, Charlie. It must be awful to need this much front."

"For a horrid while I thought *you* did."

She sobered, and met my eyes. "Charlie, I wish I could resent that. In a way I do need it."

My eyes narrowed. "Just what do you mean?"

"I need Bryce Carrington."

"This time you can trot out the qualifiers. *How* do you need him?"

"I need his money," she cried.

How can you relax and tense up at the same time? "Oh, *damn* it, Shara! Is *that* how you're going to get to dance? Buy your way in? What does a critic go for, these days?"

"Charlie, stop it. I need Carrington to get seen. He's going to rent me a hall, that's all."

"If that's all, let's get out of the dump right now. I can bor . . . get enough cash to rent you any hall in the world, and I'm just as willing to risk my money."

"Can you get me Skyfac?"

"*Uh?*"

I couldn't for the life of me imagine why she proposed to go to Skyfac to dance. Why not Antarctica?

"Shara, you know even less about space than I do, but you must know that a satellite broadcast doesn't have to be made from a satellite?"

"Idiot. It's the setting I want."

I thought about it. "Moon'd be better, visually. Mountains. Light. Contrast."

"The visual aspect is secondary. I don't want one-sixth gee, Charlie. I want zero gravity."

My mouth hung open.

"And I want you to be my video man."

God, she was a rare one. What I needed then was to sit there with my mouth open and think for several minutes. She let me do just that, waiting patiently for me to work it all out.

"Weight isn't a verb anymore,

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Charlie," she said finally. "That dance ended on the assertion that you can't beat gravity—you said so yourself. Well, that statement is incorrect—obsolete. The dance of the twenty-first century will have to acknowledge that."

"And it's just what you need to make it. A new kind of dance for a new kind of dancer. Unique. It'll catch the public eye, and you should have the field entirely to yourself for years. I like it, Shara. I like it. But can you pull it off?"

"I thought about what you said: that you can't beat gravity but it's beautiful to try. It stayed in my head for months, and then one day I was visiting a neighbor with a TV and I saw newsreels of the crew working on Skyfac Two. I was up all night thinking, and the next morning came up to the States and got a job in Skyfac One. I've been up there for nearly a year, getting next to Carrington. I can do it, Charlie, I can make it work." There was a ripple in her jaw that I had seen before—when she told me off in Le Maintenant. It was a ripple of determination.

Still I frowned. "With Carrington's backing."

Her eyes left mine. "There's no such thing as a free lunch."

"What does he charge?"

She failed to answer, for long enough to answer me. In that instant, I began believing in God again, for the first time in years, just to be able to hate Him.

But I kept my mouth shut. She was old enough to manage her own finances. The price of a dream gets higher every year. Hell, I'd half expected it from the moment she'd called me.

But only half.

"Charlie, don't just sit there with your face all knotted up. Say something. Cuss me out, call me a whore, *something.*"

"Nuts. You be your own conscience, I have trouble enough being my own. You want to dance, you've got a patron. So now you've got a video man."

I hadn't intended to say that last sentence at all.

Strangely, it almost seemed to disappoint her at first. But then she relaxed and smiled. "Thank you, Charlie. Can you get out of whatever you're doing right away?"

"I'm working for an educational station in Shediac. I even got to shoot some dance footage. A dancing bear from the London Zoo. The amazing thing was how well he danced." She grinned. "I can get free."

"I'm glad. I don't think I could pull this off without you."

"I'm working for you. Not for Carrington."

"All right."

"Where is the great man, anyway? Scuba diving in the bathtub?"

"No," came a quiet voice from the doorway. "I've been sky diving in the lobby."

His wheelchair was a mobile throne. He wore a four hundred dollar suit the color of strawberry ice

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cream, a powder blue turtleneck and one gold earring. The shoes were genuine leather. The watch was that newfangled bandless kind that literally tells you the time. He wasn't tall enough for her, and his shoulders were absurdly broad, although the suit tried hard to deny both. His eyes were like twin blueberries. His smile was that of a shark wondering which part will taste best. I wanted to crush his head between two boulders.

Shara was on her feet. "Bryce, this is Charles Armstead. I told you . . ."

"Oh yes. The video chap." He rolled forward and extended an impeccably manicured hand. "I'm Bryce Carrington, Armstead."

I remained seated, hands in my lap. "Oh yes. The rich chap."

One eyebrow rose an urbane quarter inch. "Oh, my. Another rude one. Well, if you're as good as Shara says you are, you're entitled."

"I'm rotten."

The smile faded. "Let's stop fencing, Armstead. I don't expect manners from creative people, but I have far more significant contempt than yours available if I need any. Now I'm tired of this damned gravity and I've had a rotten day testifying for a friend and it looks like they're going to recall me tomorrow. Do you want the job or don't you?"

He had me there. I did. "Yeah."

"All right, then. Your room is 2772. We'll be going up to Skyfac in two days. Be here at 8 A.M."

"I'll want to talk with you about what you'll be needing, Charlie," Shara said. "Give me a call tomorrow."

I whirled to face her, and she flinched from my eyes.

Carrington failed to notice. "Yes, make a list of your requirements by tomorrow, so it can go up with us. Don't scrimp—if you don't fetch it, you'll do without. Good night, Armstead."

I faced him. "Good night, Mr. Carrington." Suh.

He turned toward the narghile, and Shara hurried to refill the chamber and bowl. I turned away hastily and made for the door. My leg hurt so much I nearly fell on the way, but I set my jaw and made it. When I reached the door I said to myself, you will now open the door and go through it, and then I spun on my heel. "Carrington!"

He blinked, surprised to discover I still existed. "Yes?"

"Are you *aware* that she doesn't love you in the slightest? Does that matter to you in any way?" My voice was high, and my fists were surely clenched.

"Oh," he said, and then again, "Oh. So that's what it is. I didn't *think* success alone merited that much contempt." He put down the mouthpiece and folded his fingers together. "Let me tell you something, Armstead. No one has ever loved me, to my knowledge. This suite does not love me." His voice took on human feeling for the first time. "But it is *mine*. Now get out."

I opened my mouth to tell him

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where to put his job, and then I saw Shara's face, and the pain in it suddenly made me deeply ashamed. I left at once, and when the door closed behind me I vomited on a rug that was worth slightly less than a Hamilton Masterchrome board. I was sorry then that I'd worn a necktie.

The trip to Pike's Peak Spaceport, at least, was aesthetically pleasurable. I enjoy air travel, gliding among stately clouds, watching the rolling procession of mountains and plains, vast jigsaws of farmland and intricate mosaics of suburbia unfolding below.

But the jump to Skyfac in Carrington's personal shuttle, *That First Step*, might as well have been an old Space Commando rerun. I *know* they can't put portholes in space ships—but dammit, a shipboard video relay conveys no better resolution, color values or presence than you get on your living room tube. The only differences are that the stars don't "move" to give the illusion of travel, and there's no director editing the POV to give you dramatically interesting shots.

Aesthetically speaking. The *experiential* difference is that they do not, while you are watching the Space Commando, sell hemorrhoid remedies, strap you into a couch, batter you with thunders, make you weigh better than half a ton for an unreasonably long time, and then drop you off the edge of the world into weightlessness. I had been half expecting nausea, but what I got was even more shocking: the sudden, unprecedented, total absence of pain in my leg. At that, Shara was hit worse than I was, barely managing to deploy her dropsickness bag in time. Carrington unstrapped and administered an antinausea injection with sure movements. It seemed to take forever to hit her, but when it did there was an enormous change—color and strength returned rapidly, and she was apparently fully recovered by the time the pilot announced that we were commencing docking and would everyone please strap in and shut up? I half expected Carrington to bark manners into him, but apparently the industrial magnate was not that sort of fool. He shut up and strapped himself down.

My leg didn't hurt in the slightest. Not at all.

The Skyfac complex looked like a disorderly heap of bicycle tires and beach balls of various sizes. The one our pilot made for was more like a tractor tire. We matched course, became its axle, and matched spin, and the damned thing grew a spoke that caught us square in the airlock. The airlock was "overhead" of our couches, but we entered and left it feet first. A few yards into the spoke, the direction we traveled became "down," and handholds became a ladder. Weight increased with every step, but even when we had emerged in a rather large cubical compartment it was far less than Earth

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normal. Nonetheless, my leg resumed biting me.

The room tried to be a classic reception room, high-level ("Please be seated. His Majesty will see you shortly."), but the low gee and the p-suits racked along two walls spoiled the effect. Unlike the Space Commando's armor, a real pressure-suit looks like nothing so much as a people-shaped baggie, and they look particularly silly in repose. A young dark-haired man in tweed rose from behind a splendidly gadgeted desk and smiled. "Good to see you, Mr. Carrington, I hope you had a pleasant jump."

"Fine thanks, Tom. You remember Shara, of course. This is Charles Armstead. Tom McGillicuddy." We both displayed our teeth and said we were delighted to meet one another. I could see that beneath the pleasantries, McGillicuddy was upset about something.

"Nils and Mr. Longmire are waiting in your office, sir. There's . . . there's been another sighting."

"God *damn* it," Carrington began, and cut himself off. I stared at him. The full force of my best sarcasm had failed to anger this man. "All right. Take care of my guests while I go hear what Longmire has to say." He started for the door, moving like a beach ball in slow motion but under his own power. "Oh yes—the *Step* is loaded to the gun'ls with bulky equipment, Tom. Have her brought around to the cargo bays. Store the equipment in Six." He left, looking worried. McGillicuddy activated his desk and gave the necessary orders.

"What's going on, Tom?" Shara asked when he was through.

He looked at me before replying. "Pardon my asking, Mr. Armstead, but—are you a newsman?"

"Charlie. No, I'm not. I am a video man, but I work for Shara."

"Mmmm. Well, you'll hear about it sooner or later. About two weeks ago, an object appeared on radar within the orbit of Neptune, just appeared out of nowhere. There were . . . certain other anomalies. It stayed put for half a day and then vanished again. The Space Command slapped a hush on it, but it's common knowledge on board Skyfac."

"And the thing has been sighted again?" Shara asked.

"Just beyond the orbit of Jupiter."

I was only mildly interested. No doubt there was an explanation for the phenomenon, and since Isaac Asimov wasn't around I would doubtless never understand a word of it. Most of us gave up on intelligent nonhuman life when the last intersystem probe came back empty. "Little green men, I suppose. Can you show us the Lounge, Tom? I understand it's just like the one we'll be working in."

He seemed to welcome the change of subject. "Sure thing."

McGillicuddy led us through a p-door opposite the one Carrington

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had used, through long halls whose floors curved up ahead of and behind us. Each was outfitted differently, each was full of busy, purposeful people, and each reminded me somehow of the lobby of the New Age, or perhaps of the old movie *2001*. Futuristic Opulence, so understated as to fairly shriek. Wall Street lifted bodily into orbit—the *clocks* were on Wall Street time. I tried to make myself believe that cold, empty space lay a short distance away in any direction, but it was impossible. I decided it was a good thing spacecraft didn't have portholes—once he got used to the low gravity, a man might forget and open one to throw out a cigar.

I studied McGillicuddy as we walked. He was immaculate in every respect, from necktie down to nail polish, and he wore no jewelry at all. His hair was short and black, his beard inhibited, and his eyes surprisingly warm in a professionally sterile face. I wondered what he had sold his soul for. I hoped he had gotten his price.

We had to descend two levels to get to the Lounge. The gravity on the upper level was kept at one-sixth normal, partly for the convenience of the Lunar personnel who were Skyfac's only regular commuters, and mostly (of course) for the convenience of Carrington. But descending brought a subtle increase in weight, to nearly a quarter normal. My leg complained bitterly, but I found to my surprise that I preferred the pain to its absence. It's a little scary when an old friend goes away like that.

The Lounge was a larger room than I had expected, quite big enough for our purposes. It encompassed all three levels, and one whole wall was an immense video screen, across which stars wheeled dizzily, joined with occasional regularity by a slice of mother Terra. The floor was crowded with chairs and tables in various groupings, but I could see that, stripped, it would provide Shara with entirely adequate room to dance; equally important, my feet told me that it would make a splendid dancing surface. Then I remembered how little use the floor was liable to get.

"Well," Shara said to me with a smile, "this is what home will look like for the next six months. The Ring Two Lounge is identical to this one."

"Six?" McGillicuddy said. "Not a chance."

"*What do you mean?*" Shara and I said together.

He blinked at our combined volume. "Well, *you* might be good for that long, Charlie. But Shara's already had over a year of low gee, while she was in the typing pool."

"So what?"

"Look, you expect to be in free fall for long periods of time, if I understand this correctly?"

"Twelve hours a day," Shara agreed.

He grimaced. "Shara, I hate to say this. . . but I'll be surprised if you

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last a month. A body designed for a one-gee environment doesn't work properly in zero gee."

"But it will adapt, won't it?"

He laughed mirthlessly. "Sure. That's why we rotate all personnel Earthside every fourteen months. Your body will adapt. One way. No return. Once you've fully adapted, returning to Earth will stop your heart—if some other major systemic failure doesn't occur first. Look, you were just Earthside for three days—did you have any chest pains? Dizziness? Bowel trouble? Dropsickness on the way up?"

"All of the above," she admitted.

"There you go. You were close to the nominal fourteen-month limit when you left. And your body will adapt even faster under no gravity at all. The free fall endurance record is ninety days, by the first Skylab crew—and *they* hadn't spent a year in one-sixth gee first, *and* they weren't straining their hearts the way you will be. Hell, there are four men on Luna now, from the original dozen in the first mining team, who will never see Earth again. Eight of their teammates tried. Don't you two know *any*thing about space?"

"But I've got to have at least four months. Four months of solid work, every day. I *must.*" She was dismayed, but fighting hard for control.

McGillicuddy started to shake his head, and then thought better of it. His warm eyes were studying Shara's face. I knew exactly what he was thinking, and I liked him for it.

He was thinking, *How to tell a lovely lady her dearest dream is hopeless?*

He didn't know the half of it. I *know* how much Shara had already—irrevocably—invested in this dream, and something in me screamed.

And then I saw her jaw ripple and I dared to hope.

Doctor Panzarella was a wiry old man with eyebrows like two fuzzy caterpillars. He wore a tight fitting jumpsuit which would not foul a p-suit's seals should he have to get into one in a hurry. His shoulder-length hair, which should have been a mane on the great skull, was tied tightly back against a sudden absence of gravity. A cautious man. To employ an obsolete metaphor, he was a suspenders-*and*-belt type. He looked Shara over, ran tests, and gave her just under a month and a half. Shara said some things. I said some things. McGillicuddy said some things. Panzarella shrugged, made further, very careful tests, and reluctantly cut loose of the suspenders. Two months. Not a day over. Possibly less, depending on subsequent monitoring of her body's reactions to extended weightlessness. Then a year Earthside before risking it again. Shara seemed satisfied.

I didn't see how we could do it.

McGillicuddy had assured us that it would take Shara at least a month simply to learn to handle herself competently in zero gee, much less

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dance. Her familiarity with one-sixth gee would, he predicted, be a liability rather than an asset. Then figure three weeks of choreography and rehearsal, a week of taping and just maybe we could broadcast one dance before Shara had to return to Earth. Not good enough. She and I had calculated that we would need three successive shows, each well received, to make a big enough dent in the dance world for Shara to squeeze into it. A year was far too big a spacing—and *who knew how soon Carrington would tire of her?* So I hollered at Panzarella.

"Mister Armstead," he said hotly, "I am specifically contractually forbidden to allow this young lady to commit suicide." He grimaced sourly. "I'm told it's terrible public relations."

"Charlie, it's okay." Shara insisted. "I can fit in three dances. We may lose some sleep, but we can do it."

"I once told a man nothing was impossible. He asked me if I could ski through a revolving door. You haven't got. . ."

My brain slammed into hyperdrive, thought about things, kicked itself in the ass a few times, and returned to realtime in time to hear my mouth finish without a break: ". . . much choice, though. Okay Tom, have that damned Ring Two Lounge cleaned out, I want it naked and spotless and have somebody paint over that damned video wall, the same shade as the other three and I mean *the same.* Shara, get out of those clothes and into your leotard. Doctor, we'll be seeing you in twelve hours. Quit gaping and *go,* Tom—we'll be going over there at once; *where the hell are my cameras?*"

McGillicuddy sputtered.

"Get me a torch crew—I'll want holes cut through the walls, cameras behind them, one-way glass, six locations, a room adjacent to the Lounge for a mixer console the size of a jetliner cockpit, and bolt a coffee machine next to the chair. I'll need another room for editing, complete privacy and total darkness, size of an efficiency kitchen, another coffee machine."

McGillicuddy finally drowned me out. "Mister *Armstead,* this is the Main Ring of the Skyfac One complex, the administrative offices of one of the wealthiest corporations in existence. If you think this whole Ring is going to stand on its head for you. . . ."

So we brought the problem to Carrington. He told McGillicuddy that henceforth, Ring Two was *ours,* as well as any assistance whatsoever that we requested. He looked rather distracted. McGillicuddy started to tell him by how many weeks all this would put off the opening of the Skyfac Two complex. Carrington replied very quietly that he could add and subtract quite well, thank you, and McGillicuddy got white and quiet.

I'll give Carrington that much. He gave us a free hand.

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Panzarella ferried over to Skyfac Two with us. We were chauffeured by lean-jawed astronaut types, on vehicles looking, for all the world, like pregnant broomsticks. It was as well that we had the doctor with us—Shara fainted on the way over. I nearly did myself, and I'm sure that broomstick has my thigh-prints on it yet—falling through space is a scary experience the first time. Shara responded splendidly once we had her inboard again, and fortunately her dropsickness did not return—nausea can be a nuisance in free fall, a disaster in a p-suit. By the time my cameras and mixer had arrived, she was on her feet and sheepish. And while I browbeat a sweating crew of borrowed techs into installing them faster than was humanly possible, Shara began learning how to move in zero gee.

We were ready for the first taping in three weeks.

Living quarters and minimal life support were rigged for us in Ring Two so that we could work around the clock if we chose, but we spent nearly half of our nominal "off-hours" in Skyfac One. Shara was required to spend half of three days a week there with Carrington, and spent a sizable portion of her remaining putative sack time out in space, in a p-suit. At first it was a conscious attempt to overcome her gut-level fear of all that emptiness. Soon it became her meditation, her retreat, her artistic reverie, and attempt to gain from contemplation of the cold black depths enough insight into the meaning of extraterrestrial existence to dance of it.

I spent my own time arguing with engineers and electricians and technicians and a damn fool union legate who insisted that the second lounge, finished or not, belonged to the hypothetical future crew and administrative personnel. Securing his permission to work there wore the lining off my throat and the insulation off my nerves. Far too many nights I spent slugging instead of sleeping. Minor example: every interior wall in the whole damned second Ring was painted the identical shade of turquoise—and they couldn't duplicate it to cover that godforsaken video wall in the Lounge. It was McGillicuddy who saved me from gibbering apoplexy—at his suggestion I washed off the third latex job, unshipped the outboard camera that fed the wall-screen, brought it inboard and fixed it to scan an interior wall in an adjoining room. That made us friends again.

It was all like that: jury-rig, improvise, file to fit and paint to cover. If a camera broke down, I spent sleep time talking with off-shift engineers, finding out what parts in stock could be adapted. It was simply too expensive to have anything shipped up from Earth's immense gravity well, and Luna didn't have what I needed.

At that, Shara worked harder than I did. A body must totally recoordinate itself to function in the absence of weight—she had to forget literally

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everything she had ever known or learned about dancing and acquire a whole new set of skills. This turned out to be even harder than we had expected. McGillicuddy had been right: what Shara had learned in her year of one-sixth gee was an exaggerated attempt to *retain* terrestrial patterns of coordination—rejecting them altogether was actually easier for *me*.

But I couldn't keep up with her—I had to abandon any thought of handheld camera work and base my plans solely on the six fixed cameras. Fortunately GLX-5000s have a ball-and-socket mount: even behind that damned one-way glass I had about forty degrees of traverse on each one. Learning to coordinate all six simultaneously on the Hamilton Board did a truly extraordinary thing to me—it lifted me that one last step to unity with my art. I found that I could learn to be aware of all six monitors with my mind's eye, to perceive almost spherically, to—not share my attention among the six—to *encompass* them all, seeing like a six-eyed creature from many angles at once. My mind's eye became holographic, my awareness multilayered. I began to really understand, for the first

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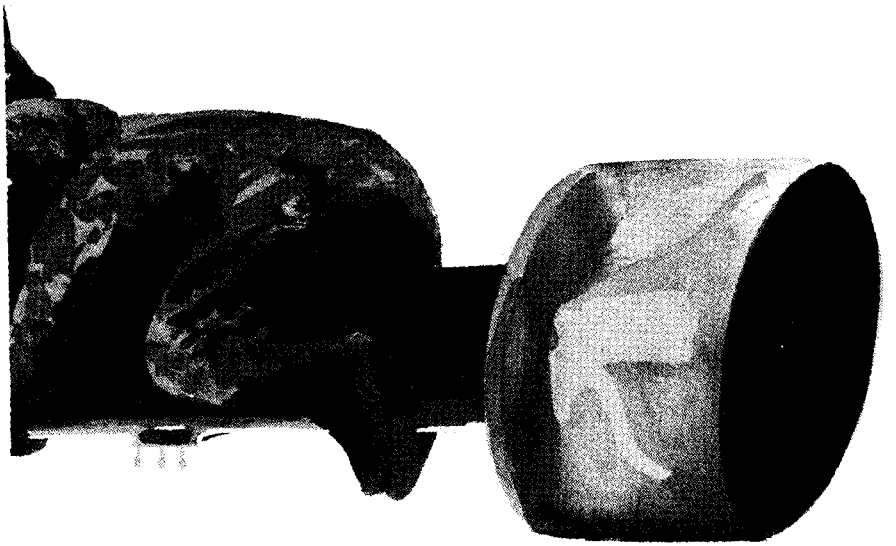

time, three-dimensionality.

It was that fourth dimension that was the kicker. It took Shara two days to decide that she could not possibly become proficient enough in free-fall maneuvering to sustain a half-hour piece in the time required. So she rethought her work plan too, adapting her choreography to the demands of exigency. She put in six hard days under normal Earth weight.

And for her, too, the effort brought her that one last step toward apotheosis.

On Monday of the fourth week we began taping *Liberation.*

Establishing shot:

A great turquoise box, seen from within. Dimensions unknown, but the color somehow lends an impression of immensity, of vast distances. Against the far wall, a swinging pendulum attests that this is a standard-gravity environment; but the pendulum swings so slowly and is so featureless in construction that it is impossible to estimate its size and so extrapolate that of the room.

Because of this trompe l'oeil effect,

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the room seems rather smaller than it really is when the camera pulls back and we are wrenched into proper perspective by the appearance of Shara, prone, inert, face down on the floor, facing us.

She wears beige leotard and tights. Hair the color of fine mahogany is pulled back into a loose ponytail which fans across one shoulder blade. She does not appear to breathe. She does not appear to be alive.

Music begins. The aging Mahavishnu, on obsolete nylon acoustic, establishes a minor E in no hurry at all. A pair of small candles in simple brass holders appear inset on either side of the room. They are larger than life, though small beside Shara. Both are unlit.

Her body . . . there is no word. It does not move, in the sense of motor activity. One might say that a ripple passes through it, save that the motion is clearly all outward from her center. She *swells,* as if the first breath of life was being taken by her whole body at once. She lives.

The twin wicks begin to glow, oh, softly. The music takes on quiet urgency.

Shara raises her head to us. Her eyes focus somewhere beyond the camera yet short of infinity. Her body writhes, undulates, and the glowing wicks are coals (that this brightening takes place in slow motion is not apparent).

A violent contraction raises her to a crouch, spilling the ponytail across her shoulder. Mahavishnu begins a cyclical cascade of runs, in increasing tempo. Long, questing tongues of yellow-orange flame begin to blossom *downward* from the twin wicks, whose coals are turning to blue.

The contraction's release flings her to her feet. The twin skirts of flame about the wicks curl up over themselves, writhing furiously, to become conventional candleflames, flickering new in normal time. Tablas, tambouras, and a bowed string bass join the guitar, and they segue into an energetic interplay around a minor seventh that keeps trying, fruitlessly, to find resolution in the sixth. The candles stay in perspective, but dwindle in size until they vanish.

Shara begins to explore the possibilities of motion. First she moves only perpendicular to the camera's line of sight, exploring that dimension. Every motion of arms or legs or head is clearly seen to be a defiance of gravity, of a force as inexorable as radioactive decay, as entropy itself. The most violent surges of energy succeed only for a time—the outflung leg falls, the outthrust arm drops. She must struggle or fall. She pauses in thought.

Her hands and arms reach out toward the camera, and at the instant they do we cut to a view from the left-hand wall. Seen from the right side, she reaches out into this new dimension, and soon begins to move in it. (As she moves backward out of the camera's field, its entire image shifts right on our screen, butted out

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of the way by the incoming image of a second camera, which picks her up as the first loses her without a visible seam.)

The new dimension too fails to fulfill Shara's desire for freedom from gravity. Combining the two, however, presents so many permutations of movement that for a while, intoxicated, she flings herself into experimentation. In the next fifteen minutes, Shara's entire background and history in dance are recapitulated, in a blinding tour de force that incorporates elements of jazz, Modern, and the more graceful aspects of Olympic-level mat gymnastics. Five cameras come into play, singly and in pairs on splitscreen, as the "bag of tricks" amassed in a lifetime of study and improvisation are rediscovered and performed by a superbly trained and versatile body, in a pyrotechnic display that would shout of joy if her expression did not remain aloof, almost arrogant. *This is the offering,* she seems to say, *which you would not accept. This, by itself, was not good enough.*

And it is not. Even in its raging energy and total control, her body returns again and again to the final compromise of mere erectness, that last simple refusal to fall.

Clamping her jaw, she works into a series of leaps, ever longer, ever higher. She seems at last to hang suspended for full seconds, straining to fly. When, inevitably, she falls, she falls reluctantly, only at the last possible instant tucking and rolling back onto her feet. The musicians are in a crescendoing frenzy. We see her now only with the single original camera, and the twin candles have returned, small but burning fiercely.

The leaps begin to diminish in intensity and height, and she takes longer to build to each one. She has been dancing flat out for nearly twenty minutes: as the candle flames begin to wane, so does her strength. At last she retreats to a place beneath the indifferent pendulum, gathers herself with a final desperation, and races forward toward us. She reaches incredible speed in a short space, hurls herself into a double roll and bounds up into the air off one foot, seeming a full second later to push off against empty air for a few more inches of height. Her body goes rigid, her eyes and mouth gape wide, the flames reach maximum brilliance, the music peaks with the tortured wail of an electric guitar and—she falls, barely snapping into a roll in time, rising only as far as a crouch. She holds there for a long moment, and gradually her head and shoulders slump, defeated, toward the floor. The candle flames draw in upon themselves in a curious way and appear to go out. The string bass saws on, modulating down to D.

Muscle by muscle, Shara's body gives up the struggle. The air seems to tremble around the wicks of the candles, which have now grown nearly as tall as her crouching form.

Shara lifts her face to the camera

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with evident effort. Her face is anguished, her eyes nearly shut. A long beat.

All at once she opens her eyes wide, squares her shoulders and contracts. It is the most exquisite and total contraction ever dreamed of, filmed in realtime but seeming almost to be in slow motion. She holds it. Mahavishnu comes back in on guitar, building in increasing tempo from a downtuned bass string to a D with a flatted fourth. Shara holds.

We shift for the first time to an overhead camera, looking down on her from a great height. As Mahavishnu's picking increases to the point where the chord seems a sustained drone. Shara slowly lifts her head, still holding the contraction, until she is staring directly up at us. She poises there for an eternity, like a spring wound to the bursting point . . .

. . . and explodes upward toward us, rising higher and faster than she possibly can in a soaring flight that *is* slow motion now, coming closer and closer until her hands disappear off either side and her face fills the screen, flanked by two candles which have bloomed into gouts of yellow flame in an instant. The guitar and bass are submerged in an orchestra.

Almost at once she whirls away from us, and the POV switches to the original camera, on which we see her fling herself down ten meters to the floor, reversing her attitude in midflight and twisting. She comes out of her roll in an absolutely flat trajectory that takes her the length of the room. She hits the far wall with a crash audible even over the music, shattering the still pendulum. Her thighs soak up the kinetic energy and then release it, and once again she is racing toward us, hair streaming straight out behind her, a broad smile of triumph growing larger in the screen.

In the next five minutes all six cameras vainly try to track her as she caroms around the immense room like a hummingbird trying to batter its way out of a cage, using the walls, floor and ceiling the way a jai alai master does, *existing in three dimensions.* Gravity is defeated. The basic assumption of all dance is transcended.

Shara is transformed.

She comes to rest at last at vertical center in the forefront of the turquoise cube, arms-legs-fingers-toes-face straining *outward,* turning gently end over end. All four cameras that bear on her join in a four-way splitscreen, the orchestra resolves into its final E major, and—fade out.

I had neither the time nor the equipment to create the special effects that Shara wanted. So I figured out ways to warp reality to my need. The first candle segment was a twinned shot of a candle being blown out from above—in ultraslow motion, and in reverse. The second segment was a simple recording of reality. I had lit the candle, started

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taping—and had the Ring's spin killed. A candle behaves oddly in zero gee. The low-density combustion gases do not rise up from the flame, allowing air to reach it from beneath. The flame does not go out: it becomes dormant. Restore gravity within a minute or so, and it blooms back to life again. All I did was monkey with speeds a bit to match in with the music and Shara's dance. I got the idea from the foreman of the metal shop where we were designing things Shara would need for the next dance.

I set up a screen in the Ring One Lounge, and everyone in Skyfac who could cut work crowded in for the broadcast. They saw exactly what was being sent out over worldwide satellite hookup—(Carrington had sufficient pull to arrange twenty-five minutes without commercial interruption)—almost a full half second before the world did.

I spent the broadcast in the Communications Room, chewing my fingernails. But it went without a hitch, and I slapped my board dead and made it to the Lounge in time to see the last half of the standing ovation. Shara stood before the screen, Carrington sitting beside her, and I found the difference in their expressions instructive. Her face showed no surprise or modesty. She had had faith in herself throughout, had approved this tape for broadcast—she was aware, with that incredible detachment of which so few artists are capable, that the wild applause was only what she deserved. But her face showed that she was deeply surprised—and deeply grateful—to be given what she deserved.

Carrington, on the other hand, registered a triumph strangely mingled with relief. He too had faith in Shara, backing it with a large investment—but his faith was that of a businessman in a gamble he believes would pay off, and as I watched his eyes and the glisten of sweat on his forehead, I realized that no businessman ever takes an expensive gamble without worrying that it may be the fiasco that will begin the loss of his only essential commodity: face.

Seeing his kind of triumph next to hers spoiled the moment for me, and instead of thrilling for Shara I found myself almost hating her. She spotted me, and waved me to join her before the cheering crowd, but I turned and literally flung myself from the room. I borrowed a bottle from the metal shop foreman and got stinking.

The next morning my head felt like a fifteen amp fuse on a forty amp circuit, and I seemed to be held together only by surface tension. Sudden movements frightened me. It's a long fall off that wagon, even at one-sixth gee.

The phone chimed—I hadn't had time to rewire it—and a young man I didn't know politely announced that Mr. Carrington wished to see me in his office. At once. I spoke of a barbed wire suppository, and what

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Mr. Carrington might do with it, at once. Without changing expression, he repeated his message and disconnected.

So I crawled into my clothes, decided to grow a beard, and left. Along the way I wondered what I had traded my independence for, and why?

Carrington's office was oppressively tasteful, but at least the lighting was subdued. Best of all, its filter system would handle smoke—the sweet musk of pot lay on the air. I accepted a macrojoint of "Maoi-Zowie" from Carrington with something approaching gratitude, and began melting my hangover.

Shara sat next to his desk, wearing a leotard and a layer of sweat. She had obviously spent the morning rehearsing for the next dance. I felt ashamed, and consequently snappish, avoiding her eyes and her hello. Panzarella and McGillicuddy came in on my heels, chattering about the latest sighting of the mysterious object from deep space, which had appeared this time in the neighborhood of Mercury. They were arguing over whether it displayed signs of sentience or not, and I wished they'd shut up.

Carrington waited until we had all seated ourselves and lit up, then rested a hip on his desk and smiled. "Well, Tom?"

McGillicuddy beamed. "Better than we expected, sir. All the ratings agree we had about 74% of the world audience. . . . "

"The hell with the Neilsens," I snapped. "*What did the critics say?*"

McGillicuddy blinked. "Well, the general reaction so far is that Shara was a smash. The *Times* . . ."

I cut him off again. "What was the less than general reaction?"

"Well, nothing is ever unanimous."

"Specifics. The dance press? Liz Zimmer? Migdalski?"

"Uh. Not as good. Praise, yes—only a blind man could've panned that show. But guarded praise. Uh, Zimmer called it a magnificent dance spoiled by a gimmicky ending."

"And Migdalski?" I insisted.

"He headed his review, 'But What Do You Do For An Encore?' " McGillicuddy admitted. "His basic thesis was that it was a charming one-shot. But the *Times* . . ."

"Thank you, Tom," Carrington said quietly. "About what we expected, isn't it, my dear? A big splash, but no one's willing to call it a tidal wave yet."

She nodded. "But they will, Bryce. The next two dances will sew it up."

Panzarella spoke up. "Ms. Drummond, may I ask why you played it the way you did? Using the null-gee interlude only as a brief adjunct to conventional dance—surely you must have expected the critics to call it gimmickry."

Shara smiled and answered. "To be honest, Doctor, I had no choice. I'm learning to use my body in free fall, but it's still a conscious effort, almost a pantomime. I need another few weeks to make it second nature,

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and it *has* to be if I'm to sustain a whole piece in it. So I dug a conventional dance out of the trunk, tacked on a five minute ending that used every zero-gee move I knew, and found to my extreme relief that they made thematic sense together. I told Charlie my notion, and he made it work visually and dramatically—that whole business of the candles was his, and it underlined what I was trying to say better than any set we could have built."

"So you have not yet completed what you came here to do?" Panzarella asked Shara.

"Oh, no. Not by any means. The next dance will show the world that dance is more than controlled falling. And the third . . . the third will be what this has all been for." Her face lit, became animated. "The third dance will be the one I have wanted to dance all my life. I can't entirely picture it, yet—but I know that when I become capable of dancing it, I will create it, and it will be my greatest dance."

Panzarella cleared his throat. "How long will it take you?"

"Not long," she said. "I'll be ready to tape the next dance in two weeks, and I can start on the last one almost at once. With luck, I'll have it in the can before my month is up."

"Ms. Drummond," Panzarella said gravely, "I'm afraid you don't have another month."

Shara went white as snow, and I half rose from my seat. Carrington looked intrigued.

"How much time?" Shara asked.

"Your latest tests have not been encouraging. I had assumed that the sustained exercise of rehearsal and practice would tend to slow your system's adaptation. But most of your work has been in total weightlessness, and I failed to realize the extent to which your body is accustomed to sustained exertion—in a terrestrial environment."

"*How much time?*"

"Two weeks. Possibly three, if you spend three separate hours a day at hard exercise in two gravities."

"That's ridiculous," I burst out. "We can't start and stop the Ring six times a day, and even if we could she could break a leg in two gees."

"I've got to have four weeks," Shara said.

"Ms. Drummond, I am sorry."

"I've got to have four weeks."

Panzarella had that same look of helpless sorrow that McGillicuddy and I had had in our turn, and I was suddenly sick to death of a universe in which people had to keep looking at Shara that way. "Dammit," I roared, "she needs four weeks."

Panzarella shook his shaggy head. "If she stays in zero gee for four working weeks, she may die."

Shara sprang from her chair. "Then I'll die," she cried. "I'll take that chance. I *have* to."

Carrington coughed. "I'm afraid I can't permit you to, darling."

She whirled on him furiously.

"This dance of yours is excellent PR for Skyfac," he said calmly, "but

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if it were to kill you it might boomerang, don't you think?"

Her mouth worked, and she fought desperately for control. My own head whirled. Die? Shara?

"Besides," he added, "I've grown quite fond of you."

"Then I'll stay up here in low-gee," she burst out.

"Where? The only areas of sustained weightlessness are factories, and you're not qualified to work in one."

"Then for God's sake give me one of the new pods, the small spheres. Bryce, I'll give you a higher return on your investment than a factory pod, and I'll . . ." Her voice changed. "I'll be available to you always."

He smiled lazily. "Yes, but I might not *want* you always, darling. My mother warned me strongly against making irrevocable decisions about women. Especially informal ones. Besides, I find zero-gee sex rather too exhausting as a steady diet."

I had almost found my voice, and now I lost it again. I was glad Carrington was turning her down—but the way he did it made me yearn to drink his blood.

Shara too was speechless for a time. When she spoke, her voice was low, intense, almost pleading. "Bryce, it's a matter of timing. If I broadcast two more dances in the next four weeks, I'll have a world to return to. If I have to go Earthside and wait a year or two, that third dance will sink without a trace—no one'll be looking, and they won't have the memory of the first two. This is my only option. Bryce—*let me take the chance.* Panzarella can't guarantee four weeks will kill me."

"I can't guarantee your survival," the doctor said.

"You can't guarantee that any one of us will live out the day," she snapped. She whirled back to Carrington, held him with her eyes. "Bryce, *let me risk it.*" Her face underwent a massive effort, produced a smile that put a knife through my heart. "I'll make it worth your while."

Carrington savored that smile and the utter surrender in her voice like a man enjoying a fine claret. I wanted to slay him with my hands and teeth, and I prayed that he would add the final cruelty of turning her down. But I had underestimated his true capacity for cruelty.

"Go ahead with your rehearsal, my dear," he said at last. "We'll make a final decision when the time comes. I shall have to think about it."

I don't think I've ever felt so hopeless, so . . . impotent in my life. Knowing it was futile, I said, "Shara, I can't let you risk your life . . ."

"I'm going to do this, Charlie," she cut me off, "with or without you. No one else knows my work well enough to tape it properly, but if you want out I can't stop you." Carrington watched me with detached interest. "Well?"

I said a filthy word. "You know the answer."

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"Then let's get to work."

Tyros are transported on the pregnant broomsticks. Old hands hang outside the airlock, dangling from handholds on the outer surface of the spinning Ring. They face in the direction of the spin, and when their destination comes under the horizon, they just drop off. Thruster-units built into gloves and boots supply the necessary course corrections. The distances involved are small. Shara and I, having spent more weightless hours than some technicians who'd been in Skyfac for years, were old hands. We made scant and efficient use of our thrusters, chiefly in canceling the energy imparted to us by the spin of the Ring we left. We had throat mikes and hearing-aid-sized receivers, but there was no conversation on the way across the void. I spent the journey appreciating the starry emptiness through which I fell—I had come, perforce, to understand the attraction of sky diving—and wondering whether I would ever get used to the cessation of pain in my leg. It even seemed to hurt less under spin those days.

We grounded, with much less force than a sky diver does, on the surface of the new studio. It was an enormous steel globe, studded with sunpower screens and heat-losers, tethered to three more spheres in various stages of construction on which p-suited figures were even now working. McGillicuddy had told me that the complex when completed would be used for "controlled density processing," and when I said "How nice," he added, "Dispersion foaming and variable density casting," as if that explained everything. Perhaps it did. Right at the moment, it was Shara's studio.

The airlock led to a rather small working space around a smaller interior sphere some fifty meters in diameter. It too was pressurized, intended to contain a vacuum, but its locks stood open. We removed our p-suits, and Shara unstrapped her thruster bracelets from a bracing strut and put them on, hanging by her ankles from the strut while she did so. The anklets went on next. As jewelry they were a shade bulky—but they had twenty minutes' continuous use each, and their operation was not visible in normal atmosphere and lighting. Zero-gee dance without them would have been enormously more difficult.

As she was fastening the last strap I drifted over in front of her and grabbed the strut. "Shara . . ."

"Charlie, I can beat it. I'll exercise in *three* gravities, and I'll sleep in two, and I'll make this body last. I know I can."

"You could skip *Mass Is A Verb* and go right to the *Stardance*."

She shook her head. "I'm not ready yet—and neither is the audience. I've got to lead myself and them through dance in a sphere first—in a contained space—before I'll be ready to dance in empty space, or for them to appreciate it. I have to

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free my mind, and theirs, from just about every preconception of dance, change the postulates. Even two stages is too few—but it's the irreducible minimum." Her eyes softened. "Charlie—I must."

"I know," I said gruffly and turned away. Tears are a nuisance in free fall—they don't *go* anywhere. I began hauling myself around the surface of the inner sphere toward the camera emplacement I was working on, and Shara entered the inner sphere to begin rehearsal.

I prayed as I worked on my equipment, snaking cables among the bracing struts and connecting them to drifting terminals. For the first time in years I prayed, prayed that Shara would make it. That we both would.

The next twelve days were the toughest of my life. Shara worked twice as hard as I did. She spent half of every day working in the studio, half of the rest in exercise under two and a quarter gravities (the most Dr. Panzarella would permit), and half of the rest in Carrington's bed, trying to make him contented enough to let her stretch her time limit. Perhaps she slept in the few hours left over. I only know that she never looked tired, never lost her composure or her dogged determination. Stubbornly, reluctantly, her body lost its awkwardness, took on grace even in an environment where grace required enormous concentration. Like a child learning to walk, Shara learned how to fly.

I even began to get used to the absence of pain in my leg.

What can I tell you of *Mass*, if you have not seen it? It cannot be described, even badly, in mechanistic terms, the way a symphony could be written out in words. Conventional dance terminology is, by its built-in assumptions, worse than useless, and if you are at all familiar with the new nomenclature you *must* be familiar with *Mass Is A Verb*, from which it draws *its* built-in assumptions.

Nor is there much I can say about the technical aspects of *Mass*. There were no special effects; not even music. Brindle's superb score was composed *from the dance*, and added to the tape with my permission two years later, but it was for the original, silent version that I was given the Emmy. My entire contribution, aside from editing and installing the two trampolines, was to camouflage batteries of wide-dispersion light sources in clusters around each camera eye, and wire them so that they energized only when they were out-of-frame with respect to whichever camera was on at the time—ensuring that Shara was always lit from the front, presenting two (not always congruent) shadows. I made no attempt to employ flashy camera work; I simply recorded what Shara danced, changing POV only as she did.

No, *Mass Is A Verb* can be described only in symbolic terms, and then poorly. I can say that Shara demonstrated that mass and inertia

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are as able as gravity to supply the dynamic conflict essential to dance. I can tell you that from them she distilled a kind of dance that could only have been imagined by a group-head consisting of an acrobat, a stunt-diver, a skywriter and an underwater ballerina. I can tell you that she dismantled the last interface between herself and utter freedom of motion, subduing her body to her will and space itself to her need.

And still I will have told you next to nothing. For Shara sought more than freedom—she sought meaning. *Mass* was, above all, a spiritual event—its title-pun paralleling its thematic ambiguity between the technological and the theological. Shara made the human confrontation with existence a transitive act, literally meeting God halfway. I do not mean to imply that her dance at any time addressed an exterior God, a discrete entity with or without white beard. Her dance addressed reality, gave successive expression to the Three Eternal Questions asked by every human being who ever lived.

Her dance observed her *self*, and asked, "*How have I come to be here*?"

Her dance observed the universe in which self existed, and asked, "*How did all this come to be here with me*?"

And at last, observing her self in relation to its universe, "*Why am I so alone*?"

And having asked these questions, having earnestly asked them with every muscle and sinew she possessed, she paused, hung suspended in the center of the sphere, her body and soul open to the universe, and when no answer came, she contracted. Not in a dramatic, ceiling-spring sense as she had in *Liberation*, a compressing of energy and tension. This was physically similar, but an utterly different phenomenon. It was a focusing inward, an act of introspection, a turning of the mind's (soul's?) eye in upon itself, to seek answers that lay nowhere else. Her body too, therefore, seemed to fold in upon itself, compacting her mass, so evenly that her position in space was not disturbed.

And reaching within herself, she closed on emptiness. The camera faded out, leaving her alone, rigid, encapsulated, yearning. The dance ended, leaving her three questions unanswered, the tension of their asking unresolved. Only the expression of patient waiting on her face blunted the shocking edge of the non-ending, made it bearable, a small, blessed sign whispering, "To be continued."

By the eighteenth day we had it in the can, in rough form. Shara put it immediately out of her mind and began choreographing *Stardance*, but I spent two hard days of editing before I was ready to release the tape for broadcast. I had four days until the half-hour of prime time Carrington had purchased—but that wasn't the deadline I felt breathing down

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the back of my neck.

McGillicuddy came into my workroom while I was editing, and although he saw the tears running down my face he said no word. I let the tape run, and he watched in silence, and soon his face was wet, too. When the tape had been over for a long time he said, very softly, "One of these days I'm going to have to quit this stinking job."

I said nothing.

"I used to be a karate instructor. I was pretty good. I could teach again, maybe do exhibition work, make ten percent of what I do now."

I said nothing.

"The whole damned Ring's bugged, Charlie. The desk in my office can activate and tap any vidphone in Skyfac. Four at a time, actually."

I said nothing.

"I saw you both in the airlock, when you came back the last time. I saw her collapse. I saw you bringing her around. I heard her make you promise not to tell Dr. Panzarella."

I waited. Hope stirred.

He dried his face. "I came in here to tell you I was going to Panzarella, to tell him what I saw. He'd bully Carrington into sending her home right away."

"And now?" I said.

"I've seen that tape."

"And you know the *Stardance* will probably kill her?"

"Yes."

"And you know we have to let her do it?"

"Yes."

Hope died. I nodded. "Then get out of here and let me work."

He left.

On Wall Street and aboard Skyfac it was late afternoon when I finally had the tape edited to my satisfaction. I called Carrington, told him to expect me in half an hour, showered, shaved, dressed, and left.

A major of the Space Command was there with him when I arrived, but he was not introduced and so I ignored him. Shara was there too, wearing a thing made of orange smoke that left her breasts bare. Carrington had obviously made her wear it, as an urchin writes filthy words on an altar, but she wore it with a perverse and curious dignity that I sensed annoyed him. I looked her in the eye and smiled. "Hi, kid. It's a good tape."

"Let's see," Carrington said. He and the major took seats behind the desk, and Shara sat beside it.

I fed the tape into the video rig built into the office wall, dimmed the lights, and sat across from Shara. It ran twenty minutes, uninterrupted, no soundtrack, stark naked.

It was terrific.

"Aghast" is a funny word. To make you aghast, a thing must hit you in a place you haven't armored over with cynicism yet. I seem to have been born cynical; I have been aghast three times that I can remember. The first was when I learned, at the age of three, that there were people who could deliberately hurt

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kittens. The second was when I learned, at age seventeen, that there were people who could actually take LSD and then hurt other people for fun. The third was when *Mass Is A Verb* ended and Carrington said in perfectly conversational tones, "Very pleasant; very graceful. I like it," when I learned, at age forty-five, that there were men, not fools or cretins but intelligent men, who could watch Shara Drummond dance and fail to *see*. We all, even the most cynical of us, always have some illusion which we cherish.

Shara simply let it bounce off her somehow, but I could see that the major was as aghast as I, controlling his features with a visible effort.

Suddenly welcoming a distraction from my horror and dismay, I studied him more closely, wondering for the first time what he was doing here. He was my age, lean and more hardbitten than I am, with silver fuzz on top of his skull and an extremely tidy mustache on the front. I'd taken him for a crony of Carrington's, but three things changed my mind. Something indefinable about his eyes told me that he was a military man of long combat experience. Something equally indefinable about his carriage told me that he was on duty at the moment. And something quite definable about the line his mouth made told me that he was disgusted with the duty he had drawn.

When Carrington went on, "What do you think, Major?" in polite tones, the man paused for a moment, gathering his thoughts and choosing his words. When he did speak, it was not to Carrington.

"Ms. Drummond," he said quietly, "I am Major William Cox, commander of *S.C. Champion*, and I am honored to meet you. That was the most profoundly moving thing I have ever seen."

Shara thanked him most gravely. "This is Charles Armstead, Major Cox. He made the tape."

Cox regarded me with new respect. "A magnificent job, Mister Armstead." He stuck out his hand and I shook it.

Carrington was beginning to understand that we three shared a thing which excluded him. "I'm glad you enjoyed it, Major," he said with no visible trace of sincerity. "You can see it again on your television tomorrow night, if you chance to be off duty. And eventually, of course, cassettes will be made available. Now perhaps we can get to the matter at hand."

Cox's face closed as if it had been zippered up, became stiffly formal. "As you wish, sir."

Puzzled, I began what I thought was the matter at hand. "I'd like your own Comm Chief to supervise the actual transmission this time, Mr. Carrington. Shara and I will be too busy to. . . "

"My Comm Chief will supervise the broadcast, Armstead," Carrington interrupted, "but I don't think you'll be particularly busy."

I was groggy from lack of sleep;

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my uptake was rather slow.

He touched his desk delicately. "McGillicuddy, report at once," he said, and released it. "You see, Armstead, you and Shara are both returning to Earth. At once."

"*What*?"

"Bryce, you *can't*," Shara cried. "You *promised*."

"I promised I would think about it, my dear," he corrected.

"The hell you say. That was weeks ago. Last night you *promised*."

"Did I? My dear, there were no witnesses present last night. Altogether for the best, don't you agree?"

I was speechless with rage.

McGillicuddy entered. "Hello, Tom," Carrington said pleasantly. "You're fired. You'll be returning to Earth at once, with Ms. Drummond and Mr. Armstead, aboard Major Cox's vessel. Departure in one hour, and don't leave anything you're fond of." He glanced from McGillicuddy to me. "From Tom's desk you can tap any vidphone in Skyfac. From my desk you can tap Tom's desk."

Shara's voice was low. "Bryce, two days. God damn you, name your price."

He smiled slightly. "I'm sorry, darling. When informed of your collapse, Dr. Panzarella became most specific. Not even one more day. Alive you are a distinct plus for Skyfac's image—you are my gift to the world. Dead you are an albatross around my neck. I cannot allow you to die on my property. I anticipated that you might resist leaving, and so I spoke to a friend in the," he glanced at Cox, "*higher* echelons of the Space Command, who was good enough to send the Major here to escort you home. You are not under arrest in the legal sense—but I assure you that you have no choice. Something like protective custody applies. Goodbye, Shara." He reached for a stack of reports on his desk, and I surprised myself considerably.

I cleared the desk entirely, tucked head catching him squarely in the sternum. His chair was belted to the deck and so it snapped clean. I recovered so well that I had time for one glorious right. Do you know how, if you punch a basketball squarely, it will bounce up from the floor? That's what his head did, in low-gee slow motion.

Then Cox had hauled me to my feet and shoved me into the far corner of the room. "Don't," he said to me, and his voice must have held a lot of that "habit of command" they talk about because it stopped me cold. I stood breathing in great gasps while Cox helped Carrington to his feet.

The millionaire felt his smashed nose, examined the blood on his fingers, and looked at me with raw hatred. "You'll never work in video again, Armstead. You're through. Finished. Un-em-ployed, you get that?"

Cox tapped him on the shoulder, and Carrington spun on him. "What the hell do you want?" he barked.

Cox smiled. "Carrington, my late

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father once said, 'Bill, make your enemies by choice, not by accident.' Over the years I have found that to be excellent advice. You suck."

"And not particularly well," Shara agreed.

Carrington blinked. Then his absurdly broad shoulders swelled and he roared, "Out, all of you! *Off my property at once*!"

By unspoken consent, we waited for McGillicuddy, who knew his cue. "Mister Carrington, it is a rare privilege and a great honor to have been fired by you. I shall think of it always as a Pyrrhic defeat." And he half-bowed and we left, each buoyed by a juvenile feeling of triumph that must have lasted ten seconds.

The sensation of falling that comes with zero gee is literal truth, but your body quickly learns to treat it as an illusion. Now, in zero gee for the last time, for the half-hour before I would be back in Earth's own gravitational field, I felt like I was falling. Plummeting into some bottomless gravity well, dragged down by the anvil that was my heart, the scraps of a dream that should have held me aloft fluttering overhead.

The *Champion* was three times the size of Carrington's yacht, which childishly pleased me until I recalled that he had summoned it here without paying for either fuel or crew. A guard at the airlock saluted as we entered. Cox led us to a compartment aft of the airlock where we were to strap in. He noticed along the way that I used only my left hand to pull myself along, and when we stopped, he said. "Mr. Armstead, my late father also told me, 'Hit the soft parts with your hand. Hit the hard parts with a utensil.' Otherwise I can find no fault with your technique. I wish I could shake your hand."

I tried to smile, but I didn't have it in me. "I admire your taste in enemies, Major."

"A man can't ask for more. I'm afraid I can't spare time to have your hand looked at until we've grounded. We begin reentry immediately."

"Forget it."

He bowed to Shara, did *not* tell her how deeply sorry he was to et cetera, wished us all a comfortable journey and left. We strapped into our acceleration couches to await ignition. There ensued a long and heavy silence, compounded of a mutual sadness that bravado could only have underlined. We did not look at each other, as though our combined sorrow might achieve some kind of critical mass. Grief struck us dumb, and I believe that remarkably little of it was self-pity.

But then a whole lot of time seemed to have gone by. Quite a bit of intercom chatter came faintly from the next compartment, but ours was not in circuit. At last we began to talk, desultorily, discussing the probable critical reaction to *Mass Is A Verb*, whether analysis was worthwhile or the theater really dead, anything at all except future plans.

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Eventually there was nothing else to talk about, so we shut up again. I guess I'd say we were in shock.

For some reason I came out of it first. "What in hell is taking them so long?" I barked irritably.

McGillicuddy started to say something soothing, then glanced at his watch and yelped. "You're right. It's been nearly an hour."

I looked at the wall clock, got hopelessly confused until I realized it was on Greenwich time rather than Wall Street, and realized he was correct. "Chrissakes," I shouted, "the whole bloody *point* of this exercise is to protect Shara from overexposure to free fall! I'm going forward."

"Charlie, hold it." McGillicuddy, with two good hands, unstrapped faster than I. "Dammit, stay right there and cool off. I'll go find out what the holdup is."

He was back in a few minutes, and his face was slack. "We're not going anywhere. Cox has orders to sit tight."

"What? Tom, what the *hell* are you talking about?"

His voice was all funny. "Red fireflies. More like bees, actually. In a balloon."

He simply *could not* be joking with me, which meant he flat out *had* to have gone completely round the bend, which meant that somehow I had blundered into my favorite nightmare where everyone but me goes crazy, and begins gibbering at me. So I lowered my head like an enraged bull, and charged out of the room so fast the door barely had time to get out of my way.

It just got worse. When I reached the door to the bridge I was going much too fast to be stopped by anything short of a body block, and the crewmen present were caught flatfooted. There was a brief flurry at the door, and then I was on the bridge, and then I decided that I had gone crazy too, which somehow made everything all right.

The forward wall of the bridge was one enormous video tank—just enough off center to faintly irritate me, standing out against the black deep as clearly as cigarettes in a darkroom, there truly did swarm a multitude of red fireflies.

The conviction of unreality made it okay. But then Cox snapped me back to reality with a bellowed, *"Off this bridge, Mister."* If I'd been in a normal frame of mind it would have blown me out the door and into the farthest corner of the ship; in my current state it managed to jolt me into acceptance of the impossible situation. I shivered like a wet dog and turned to him.

"Major," I said desperately, "What is going on?"

As a king may be amused by an insolent varlet who refuses to kneel, he was bemused by the phenomenon of someone failing to obey him. It bought me an answer. "We are confronting intelligent alien life," he said concisely. "I believe them to be sentient plasmoids."

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I had never for a moment believed that the mysterious object which had been leap-frogging around since I came to Skyfac was *alive*. I tried to take it in, then abandoned the task and went back to my main priority. "I don't care if they're eight tiny reindeer; you've got to get this can back to Earth *now*."

"Sir, this vessel is on Emergency Red Alert and on Combat Standby. At this moment the suppers of everyone in North America are getting cold. I will consider myself fortunate if I ever see Earth again. Now get off my bridge."

"But you don't *understand*. Sustained free fall might kill Shara. That's what you came up here to prevent, dammit . . . "

"*MISTER ARMSTEAD*! This is a military vessel. We are facing nearly a dozen intelligent beings who appeared out of hyperspace near here twenty minutes ago, beings who therefore use a drive beyond my conception with no visible parts. If it makes you feel any better I am aware that I have a passenger aboard of greater intrinsic value to my species than this ship and everyone else on her, and if it is any comfort to you this knowledge already provides a distraction I need like an auxiliary anus, and I can no more leave this orbit than I can grow horns. Now will you get off this bridge or will you be dragged?"

I didn't get a chance to decide; they dragged me.

On the other hand, by the time I got back to our compartment, Cox had put our vidphone screen in circuit with the tank on the bridge. Shara and McGillicuddy were studying it with rapt attention. Having nothing better to do, I did too.

McGillicuddy had been right. They *did* act more like bees, in the swarming rapidity of their movement. It was awhile before I could get an accurate count: ten of them. And they *were* in a balloon—a faint, barely tangible thing on the fine line between transparency and translucence. Though they darted like furious red gnats, it was only within the confines of the spheroid balloon—they never left it or seemed to touch its inner surface.

As I watched, the last of the adrenalin rinsed out of my kidneys, but it left a sense of frustrated urgency. I tried to grapple with the fact that these Space Commando special effects represented something that was—more important than Shara. It was a primevally disturbing notion, but I could not reject it.

In my mind were two voices, each hollering questions at the top of their lungs, each ignoring the other's questions. One yelled: *Are those things friendly? Or hostile? Or do they even use those concepts? How big are they? How far away? From where?* The other voice was less ambitious but just as loud; all it said, over and over again, was: *How much longer can Shara remain in free fall without dooming herself?*

Shara's voice was full of wonder,

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"They're . . . they're *dancing*."

I looked closer. If there was a pattern to the flies-on-garbage swarm they made, I couldn't detect it. "Looks random to me."

"Charlie, look. All that furious activity, and they never bump into each other or the walls of that envelope they're in. They must be in orbits as carefully choreographed as those of electrons."

"Do atoms dance?"

She gave me an odd look. "Don't they, Charlie?"

"Laser beam," McGillicuddy said.

We looked at him.

"Those things have to be plasmoids—the man I talked to said they were first spotted on radar. That means they're ionized gases of some kind—the kind of thing that used to cause UFO reports." He giggled, then caught himself. "If you could slice through that envelope with a laser, I'll bet you could deionize them pretty good—besides, that envelope has to hold their life support, whatever it is they metabolize."

I was dizzy. "Then we're not defenseless?"

"You're both talking like soldiers," Shara burst out. "I tell you they're dancing. Dancers aren't fighters."

"Come on, Shara," I barked. "Even if those things happen to be remotely like us, that's not true. Samurai, karate, kung fu—they're dance." I nodded to the screen. "All we know about these animated embers is that they travel interstellar space. That's enough to scare me."

"Charlie, look at them," she commanded.

I did.

By God, they didn't look threatening. They did, the more I watched, seem to move in a dancelike way, whirling in mad adagios just too fast for the eye to follow. Not like conventional dance—more analogous to what Shara had begun with *Mass Is A Verb*. I found myself wanting to switch to another camera for contrast of perspective, and that made my mind start to wake up at last. Two ideas surfaced, the second one necessary in order to sell Cox the first.

"How far do you suppose we are from Skyfac?" I asked McGillicuddy.

He pursed his lips. "Not far. There hasn't been much more than maneuvering acceleration. The damn things were probably attracted to Skyfac in the first place—it must be the most easily visible sign of intelligent life in this system." He grimaced. "Maybe they don't *use* planets."

I reached forward and punched the audio circuit. "Major Cox."

"*Get off this circuit.*"

"How would you like a closer view of those things?"

"We're staying put. Now stop jiggling my elbow and get off this circuit or I'll. . . ."

"Will you listen to me? I have four mobile cameras in space, remote control, self-contained power source and light, and better resolution than you've got. They were set up to tape

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Shara's next dance."

He shifted gears at once. "Can you patch them into my ship?"

"I think so. But I'll have to get back to the master board in Ring One."

"No good, then. I can't tie myself to a top—what if I have to fight or run?"

"Major—how far a walk is it?"

It startled him a bit. "A mile or two, as the crow flies. But you're a groundlubber."

"I've been in free fall for most of two months. Give me a portable radar and I can ground on Phobos."

"Mmmm. You're a civilian—but dammit, I need better video. Permission granted."

Now for the first idea. "Wait—one thing more. Shara and Tom must come with me."

"Nuts. This isn't a field trip."

"Major Cox—Shara *must* return to a gravity field as quickly as possible. Ring One'll do—in fact, it'd be ideal, if we enter through the 'spoke' in the center. She can descend very slowly and acclimatize gradually, the way a diver decompresses in stages, but in reverse. McGillicuddy will have to come along to stay with her—if she passes out and falls down the tube, she could break a leg even in one-sixth gee. Besides, he's better at EVA than either of us."

He thought it over. "Go."

We went.

The trip back to Ring One was far longer than any Shara or I had ever made, but under McGillicuddy's guidance we made it with minimal maneuvering. Ring, *Champion* and aliens formed an equiangular triangle about a mile and a half on a side. Seen in perspective, the aliens took up about as much volume as Shea Stadium. They did not pause or slacken in their mad gyration, but somehow they seemed to watch us cross the gap to Skyfac. I got an impression of a biologist studying the strange antics of a new species. We kept our suit radios off to avoid distraction, and it made me just a little bit more susceptible to suggestion.

I left McGillicuddy with Shara and dropped down the tube six rings at a time. Carrington was waiting for me in the reception room, with two flunkies. It was plain to see that he was scared silly, and trying to cover it with anger. "God damn it, Armstead, those are my bloody cameras."

"Shut up, Carrington. If you put those cameras in the hands of the best technician available—me—and if I put their data in the hands of the best strategic mind in space—Cox—we *might* be able to save your damned factory for you. And the human race for the rest of us." I moved forward, and he got out of my way. It figured. Putting all humanity in danger might just be bad PR.

After all the practicing I'd done it wasn't hard to direct four mobile cameras through space simultaneously by eye. The aliens ignored their

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approach. The Skyfac comm crew fed my signals to the *Champion*, and patched me in to Cox on audio. At his direction I bracketed the balloon with the cameras, shifting POV at his command. Space Command Headquarters must have recorded the video, but I couldn't hear their conversation with Cox, for which I was grateful. I gave him slow motion replay, close-ups, splitscreens—everything at my disposal. The movements of individual fireflies did not appear particularly symmetrical, but patterns began to repeat. In slow motion they looked more than ever as though they were dancing, and although I couldn't be sure, it seemed to me that they were increasing their tempo. Somehow the dramatic tension of their dance seemed to build.

And then I shifted POV to the camera which included Skyfac in the background, and my heart turned to hard vacuum and I screamed in pure primal terror—halfway between Ring One and the swarm of aliens, coming up on them slowly but inexorably, was a p-suited figure that had to be Shara.

With theatrical timing, McGillicuddy appeared in the doorway, leaning heavily on the Chief Engineer, his face drawn with pain. He stood on one foot, the other leg plainly broken.

"Guess I can't . . . go back to exhibition work . . . after all," he gasped. "Said . . . 'I'm sorry, Tom' . . . knew she was going to swing on me . . . wiped me out anyhow. Oh dammit, Charlie, I'm sorry." He sank into an empty chair.

Cox's voice came urgently. "What the hell is going on? Who is that?"

She *had* to be on our frequency. "Shara!" I screamed. "Get your ass back in here!"

"I can't, Charlie." Her voice was startlingly loud, and very calm. "Halfway down the tube my chest started to hurt like hell."

"Ms. Drummond," Cox rapped, "if you approach any closer to the aliens I will destroy you."

She laughed, a merry sound that froze my blood. "Bullshit, Major. You aren't about to get gay with laser beams near those things. Besides, you need me as much as you do Charlie."

"What do you mean?"

"These creatures communicate by dance. It's their equivalent of speech, it has to be a sophisticated kind of sign language, like hula."

"You can't know that."

"I *feel* it. I know it. Hell, how else do you communicate in airless space? Major Cox, I am the only qualified interpreter the human race has at the moment. Now will you kindly shut up so I can try to learn their 'language'?"

"I have no authority to . . . "

I said an extraordinary thing. I should have been gibbering, pleading with Shara to come back, even racing for a p-suit to *bring* her back. Instead I said, "She's right. Shut up, Cox."

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"What are you trying to do?"

"Damn you, *don't waste her last effort.*"

He shut up.

Panzarella came in, shot McGillicuddy full of painkiller and set his leg right there in the room, but I was oblivious. For over an hour I watched Shara watch the aliens. I watched them myself, in the silence of utter despair, and for the life of me I could not follow their dance. I strained my mind, trying to suck meaning from their crazy whirling, and failed. The best I could do to aid Shara was to record everything that happened, for a hypothetical posterity. Several times she cried out softly, small muffled exclamations, and I ached to call out to her in reply, but did not. With the last exclamation, she used her thrusters to bring her closer to the alien swarm, and hung there for a long time.

At last her voice came over the speaker, thick and slurred at first, as though she were talking in her sleep. "God, Charlie. Strange. So strange. I'm beginning to read them."

"How?"

"Every time I begin to understand a part of the dance, it . . . it brings us closer. Not telepathy, exactly. I just . . . know them better. Maybe it is telepathy, I don't know. By dancing what they feel, they give it enough intensity to make me understand. I'm getting about one concept in three. It's stronger up close."

Cox's voice was gentle but firm. "What have you learned, Shara?"

"That Tom and Charlie were right. They are warlike. There's a flavor of arrogance to them—conviction of superiority. Their dance is a challenging, a dare. Tell Tom they *do* use planets."

"What?"

"I think at one stage of their development they're corporeal, planet-bound. Then when they have matured sufficiently, they . . . become these fireflies, like caterpillars becoming butterflies, and head out into space."

"Why?" from Cox.

"To find spawning grounds. They want Earth."

There was a silence lasting perhaps ten seconds. Then Cox spoke up quietly. "Back away, Shara. I'm going to see what lasers will do to them."

"No!" she cried, loud enough to make a really first-rate speaker distort.

"Shara, as Charlie pointed out to me, you are not only expendable, you are for all practical purposes expended."

"No!" This time it was me shouting.

"Major," Shara said urgently, "that's not the way. Believe me, they can dodge or withstand anything you or Earth can throw at them. I *know*."

"Hell and damnation, woman," Cox said, "what do you want me to do? Let them have the first shot? There are vessels from four countries

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on their way right now."

"Major, wait. Give me time."

He began to swear, then cut off. "How much time?"

She made no direct reply. "If only this telepathy thing works in reverse . . . it must. I'm no more strange to them than they are to me. Probably less so; I get the idea they've been around. Charlie?"

"Yeah."

"This is a take."

I knew. I had known since I first saw her in open space on my monitor. And I knew what she needed now, from the faint trembling of her voice. It took everything I had, and I was only glad I had it to give. With extremely realistic good cheer, I said, "Break a leg, kid," and killed my mike before she could hear the sob that followed.

And she danced.

It began slowly, the equivalent of one-finger exercises, as she sought to establish a vocabulary of motion that the creatures could comprehend. *Can you see*, she seemed to say, *that* this *movement is a reaching, a yearning? Do you see that* this *is a spurning*, this *an unfolding*, that *a graduated elision of energy? Do you feel the ambiguity in the way I distort this arabesque, or that the tension can be resolved* so?

And it seemed that Shara was right, that they had infinitely more experience with disparate cultures than we, for they were superb linguists of motion. It occurred to me later that perhaps they had selected motion for communication because of its very universality. At any rate, as Shara's dance began to build, their own began to slow down perceptibly in speed and intensity, until at last they hung motionless in space, watching her.

Soon after that Shara must have decided that she had sufficiently defined her terms, at least well enough for pidgin communication—for now she began to dance in earnest. Before she had used only her own muscles and the shifting masses of her limbs. Now she added thrusters, singly and in combination, moving within as well as in space. Her dance became a true dance: more than a collection of motions, a thing of substance and meaning. It was unquestionably the *Stardance*, just as she had prechoreographed it, as she had always intended to dance it. That it had something to say to utterly alien creatures, of man and his nature, was not at all a coincidence: it was the essential and ultimate statement of the greatest artist of her age, and it had something to say to God himself.

The camera lights struck silver from her p-suit, gold from the twin airtanks on her shoulders. To and fro against the black backdrop of space, she wove the intricacies of her dance, a leisurely movement that seemed somehow to leave echoes behind it. And the meaning of those great loops and whirls slowly became clear, drying my throat and clamping my teeth.

For her dance spoke of nothing

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more and nothing less than the tragedy of being alive, and being human. It spoke, most eloquently, of pain. It spoke, most knowingly, of despair. It spoke of the cruel humor of limitless ambition yoked to limited ability, of eternal hope invested in an ephemeral lifetime, of the driving need to try and create an inexorably predetermined future. It spoke of fear, and of hunger, and, most clearly, of the basic loneliness and alienation of the human animal. It described the universe through the eyes of man: a hostile environment, the embodiment of entropy, into which we are all thrown alone, forbidden by our nature to touch another mind save secondhand, by proxy. It spoke of the blind perversity which forces man to strive hugely for a peace which, once attained, becomes boredom. And it spoke of folly, of the terrible paradox by which man is simultaneously capable of reason and unreason, forever unable to cooperate even with himself.

It spoke of Shara and her life.

Again and again, cyclical statements of hope began, only to collapse into confusion and ruin. Again and again, cascades of energy strove for resolution, and found only frustration. All at once she launched into a pattern that seemed familiar, and in moments I recognized it: the closing movement of *Mass Is A Verb* recapitulated—not repeated but reprised, echoed, the Three Questions given a more terrible urgency by this new altar on which they were piled. And as before, it segued into that final relentless contraction, that ultimate drawing-inward of all energies. Her body became derelict, abandoned, drifting in space, the essence of her being withdrawn to her center and invisible.

The quiescent aliens stirred for the first time.

And suddenly she exploded, blossoming from her contraction not as a spring uncoils, but as a flower burst from a seed. The force of her release flung her through the void as though she were tossed like a gull in a hurricane by galactic winds. Her center appeared to hurl itself through space and time, yanking her body into a new dance.

And the new dance said, *This is what it is to be human: to see the essential existential futility of all action, all striving—and to act, to strive. This is what it is to be human: to reach forever beyond your grasp. This is what it is to be human: to live forever or die trying. This is what it is to be human: to perpetually ask the unanswerable questions, in the hope that the asking of them will somehow hasten the day when they will be answered. This is what it is to be human: to strive in the face of the certainty of failure.*

This is what it is to be human: to persist.

It said all this with a soaring series of cyclical movements that held all the rolling majesty of grand symphony, as uniquely different from each

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other as snowflakes, and as similar. And the new dance *laughed*, and it laughed as much at tomorrow as it did at yesterday, and it laughed most of all at today.

For this is what it means to be human: to laugh at what another would call tragedy.

The aliens seemed to recoil from the ferocious energy, startled, awed, and faintly terrified by Shara's indomitable spirit. They seemed to wait for her dance to wane, for her to exhaust herself, and her laughter sounded on my speaker as she redoubled her efforts, became a pinwheel, a Catherine wheel. She changed the focus of her dance, began to dance *around* them, in pyrotechnic spatters of motion that came ever closer to the intangible spheroid which contained them. They cringed inward from her, huddling together in the center of the envelope, not so much physically threatened as cowed.

This, said her body, *is what it means to be human: to commit harakiri, with a smile, if it becomes needful.*

And before that terrible assurance, the aliens broke. Without warning fireflies and balloon vanished, gone, *elsewhere*.

I know that Cox and McGillicuddy were still alive, because I saw them afterwards, and that means they were probably saying and doing things in my hearing and presence, but I neither heard nor saw them then; they were as dead to me as everything except Shara. I called out her name, and she approached the camera that was lit, until I could make out her face behind the plastic hood of her p-suit.

"We may be puny, Charlie," she puffed, gasping for breath. "But by Jesus we're tough."

"Shara—come on in now."

"You know I can't."

"Carrington'll *have* to give you a free-fall place to live now."

"A life of exile? For what? To dance? Charlie, *I haven't got anything more to say*."

"Then I'll come out there."

"Don't be silly. Why? So you can hug a p-suit? Tenderly bump hoods one last time? Balls. It's a good exit so far—let's not blow it."

"*Shara!*" I broke completely, just caved in on myself and collapsed into great racking sobs.

"Charlie, listen now," she said softly, but with an urgency that reached me even in my despair. "Listen now, for I haven't much time. I have something to give you. I hoped you'd find it for yourself, but . . . will you listen?"

"Y—yes."

"Charlie, zero-gee dance is going to get awful popular all of a sudden. I've opened the door. But you know how fads are, they'll bitch it all up unless you move fast. I'm leaving it in your hands."

"What . . . what are you talking about?"

"About you, Charlie. You're going to dance again."

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Oxygen starvation, I thought. But she can't be that low on air already. "Okay. Sure thing."

"For God's sake stop humoring me—I'm straight, I tell you. You'd have seen it yourself if you weren't so damned stupid. Don't you understand? *There's nothing wrong with your leg in free fall!*"

My jaw dropped.

"Do you hear me, Charlie? You can dance again!"

"No," I said, and searched for a reason why not. "I . . . you can't . . . it's . . . dammit, the leg's not strong enough for inside work."

"Forget for the moment that inside work'll be less than half of what you do. Forget it and remember that smack in the nose you gave Carrington. Charlie, when you leaped over the desk: *you pushed off with your right leg.*"

I sputtered for awhile and shut up.

"There you go, Charlie. My farewell gift. You know I've never been in love with you . . . but you must know that I've always loved you. Still do."

"I love you, Shara."

"So long, Charlie. Do it right."

And all four thrusters went off at once. I watched her go down. Awhile after she was too far to see, there was a long golden flame that arced above the face of the globe, waned, and then flared again as the airtanks went up.

There's a tired old hack plot about the threat of alien invasion unifying mankind overnight. It's about as realistic as Love Will Find A Way—if those damned fireflies ever come back, they'll find us just as disorganized as we were the last time. There you go.

Carrington, of course, tried to grab all the tapes and all the money—but neither Shara nor I had ever signed a contract, and her will was most explicit. So he tried to buy the judge, and he picked the wrong judge, and when it hit the papers and he saw how public and private opinion were going, he left Skyfac in a p-suit with no thrusters. I think he wanted to go the same way she had, but he was unused to EVA and let go too late. He was last seen heading in the general direction of Betelgeuse. The Skyfac board of directors picked a new man who was most anxious to wash off the stains, and he offered me continued use of all facilities.

And so I talked it over with Norrey, and she was free, and that's how the Shara Drummond Company of New Modern Dance was formed. We specialize in good dancers who couldn't cut it on Earth for one reason or another, and there are a surprising hell of a lot of them.

I enjoy dancing with Norrey. Together we're not as good as Shara was alone—but we mesh well. In spite of the obvious contraindications, I think our marriage is going to work.

That's the thing about us humans: we persist. ■

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Doug Beekman

mastering the art of space cooking

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The era of junk food in space will end someday!

Alfred Bester

Why is science fiction so serious about space travel? Hasn't it occurred to anyone that eventually it may become the equivalent of a Lindblad luxury tour? And that some descendant of Julia Child will probably publish a best-seller on Cordon Bleu Space Cookery?

In the stone age of science fiction back in the twenties nobody thought much about the haute cuisine in space. Those were the early days of the vitamin vogue, and writers thought in terms of pills. They loaded their spaceships with scientists, laboratories, and death-rays and then, as an afterthought, threw in a handful of pills which would feed the crew for a year.

In the thirties science fiction dropped the pill bit and went in for extraterrestrial menus. What this amounted to was any conventional meal with exotic names. The intrepid spacemen would knock off work in the Hyperdimension for a dinner consisting of Venusian *Grzzb* (shrimp cocktail), Martian *Schlipphh* (corned beef & cabbage with a side of home fries), Jupiter Pandowdie and Andromeda coffee.

By the 1940s science fiction was making a valiant attempt at realism, and spaceships were fitted with giant hydroponic tanks in which vegetables were grown. Some authors made their ships a couple of miles long and equipped them with dirt farms under sunlamps. They also took over the deep freeze shtick and most ships contained lockers stored with thousands of steaks. I've often wondered why it was always steak. Couldn't you kill a fiendish alien after Lobster Thermidor?

This indifference to the serious art of cooking in space is understandable in stories dealing with long, lean, bronzed heroes; that breed never sleeps, let alone eats. But what about the short, fat, pasty tourists of 2176 A.D. who plank down their $20,560 (plus tax) for a first-class round trip to the Moon, including three-day stopover at the Lunar Hilton Hotel? That breed demands luxury accommodations and would raise hell with the Matson-Moon line if they were served pills or even *Schlipphh.*

Let's take a traveler on a luxury tour and imagine what the haute

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cuisine will be like in space.

We've seen enough NASA footage and George Pal films to visualize the complications of a takeoff into space. We're not interested in technology; we're focusing on our fussy tourist and his stomach as he floats forward to the main salon after the final rocket burn. There are twenty-nine other travelers floating there, staring out the ports at the sun and the stars and trying to conceal the fact that they're feeling rather queasy.

The chef appears from the galley. He is a small man with a fierce French moustache and a furious French expression. He must be his own sous-chef and waiter and this galls him even though he's paid a fabulous salary by Matson-Moon. His colleagues, anchored on Earth, never stop jeering at him. They call him *espacon*, which is a combination of *espace* and *garcon*, with overtones of *assassin*.

He carries a net bag filled with plastic globes the size of baseballs. From each protrudes a plastic straw. "Hot!" he warns. "Hot!" And he demonstrates how each globe should be picked out of the bag by its straw. They contain steaming bouillon and you have your first snack in space, intended to settle your stomach and introduce you to the mystique of eating without the advice and consent of gravity. The chef collects the empty globes and takes them back to the galley with him. Here he sets about preparing the first in the series of $20,560 (plus tax) dinners.

MENU

Caviar Beluga
La Tortue Verte
La Mousee de Brocheton
Homardine Accompagnee de
Petites Bouchees
La Coeur de Charalais Beaugency
Endives Meuniere
Beurre Noisette
Fond d'Artichaut Chatelaine
La Pêche Flambee au Feu d'Enfer
Café Noir très Chaud

Just in case you think this is more Martian *Schlipphh* I give you the literal translation.

Sturgeon Roe

The Green Turtle

The froth of lobstered baby pickerels accompanied by little greedy mouthfuls

Beef filet from Charol with a sauce in a state of beauty

Endive as the miller's wife would cook it

Nut butter

The bottoms of artichokes as served by the lady of the Manor

A peach enflamed by the fire of hell

Black coffee very hot

There's no need to describe a null-G galley in detail. Obviously, the chef floats in midair completely surrounded by cooking equipment. He can stand on his head, as it were, and crack eggs over his shoulder. His basic problem is that nothing ever

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pours or spills or drops in free-fall. Everything has to be shaken, pushed, nudged, and coaxed into position.

He has another problem. His stove is a range of plates on the sunside of the ship. They have irised insulation so that they can be exposed to varying degrees of sun heat, all the way from nothing to pow. His refrigeration is on the zero shadowside, also with controls. But! Ah, yes, but; if the ship rolls or yaws just a few feet in its flight this throws his heat and cold control off. He picks up the intercom and hollers at the pilot, "Imbecile! You are sabotaging my soufflé! I demand lateral jets! NASA will hear of this!"

This is only one reason why crews hate luxury runs.

The sturgeon roe on the menu presents no problem. The chef has stocked a quart of Super-Press caviar, which is the classic combination of Beluga, diced hard-boiled egg and onion, packed under pressure. It looks and operates exactly like a can of aerated shaving cream. PHT! One quart is good for a hundred *hors d'oeuvres.*

The turtle soup is a powder packed in single portion capsules. Not only is the powder the quintessence of concentrated turtledom but it has been treated so that it can absorb water from the atmosphere. Nothing need be added. The chef opens each capsule and taps the powder into a plastic globe. In five minutes each globe is full of *La Tortue Verte.* Since the deliquescent action of water-absorption produces heat, the soup is hot. Add straw and serve.

(You're wondering whether he's using the bouillon globes again, because he did collect the empties, and if so how did he wash them, and if not what did he do with them, like throw them into the Atomic Engines, and how many globes does he stock in the first place, and how much soap and water is he allowed by weight constraints and how in hell do you wash anything in space anyway. Me too. I haven't figured that out yet.)

The froth of lobstered baby pickerels is a sore trial for the chef. It is essential for the dish, for his artistic reputation, to enhance it with a hint of garlic. The Maintenance Officer has absolutely prohibited the use of garlic in cooking. (He also prohibits smoking.) But the chef has located *No-Gar,* an ungarlic garlic, and smuggled a few emasculated fleurettes aboard. He tries a clove. The intercom shrills. He picks it up.

"Allo? Allo?"

"Damn it, chef, are you using garlic again? I've told you a hundred times–"

"Non! Non! Mais non!" The chef hastily shakes a little cayenne into the ventilator grille. Still protesting his innocence, he is gratified to hear that animal of an engineer start sneezing, and gently hangs up.

The preparation of the beef filets is perhaps the most typical aspect of cooking in free-fall. The chef removes them from the fridge and poises them an inch before the broil

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plate of the range. There they float while he adjusts the heat of the sun to sear them. No gravity, remember? No pots, pans, gridirons. Everything can be floated before the stove, even liquids.

For example, to *meuniere* the endives the chef removes a block of butter from the fridge and sets it before a plate. It heats, melts, and becomes a large golden globe. Then it sizzles and foams into a *Beurre Noir.* The chef thrusts the endive into the butter and gives the globe a gentle turn. It floats before the range, slowly revolving like a miniature planet, *meuniering* its contents.

Of course no plates or flatware will be used in serving the food and eating it. The chef presents the courses in midair directly before you. He floats three *blini* pht'd with Instant Beluga under your nose. You and the caviar are floating in space, confronting each other. You tap them toward your mouth and catch them like a kid engulfing tossed peanuts.

Next the Green Turtle soup which is easy after your bouillon practice. Then the froth of lobstered pickerels, looking like a foam in space, for the liquid sauce hangs in bubbles around the greedy little mouthfuls. Then the beef filets with sauce, the endive and artichokes, and there you all are, thirty luxury tourists, floating any which way in the salon with your gourmet dinner staring at you, and everyone eats with the fingers. (An ideal situation for a meet-cute, eh?)

Three wines and a cognac are served with the meal; *Dry Sack* with the soup, *Montrachat,* 2053 with the fish, a *Pommard Grande Epenots Domaine Gaunoux,* 2047 with the Charol filet, *Marc à la Cloche* with the coffee. All of them are the products of InstWine, Ltd. and SonnyBoy WineQwik of California, Inc. I will not break your heart by describing how they're prepared and packaged.

All this may take place within the next few centuries, but as one moves deeper into the future and space, the haute cuisine becomes increasingly preposterous. There may come a day when the chef is no longer aboard the ship but remains on Earth, or the Moon, cooking by remote control via tele-robot. The chef will never run the risk of burning himself, but he can punish his robot slave with a hell of a short circuit if it louses the *Coquilles St. Jacques à la Parisienne.* (Scallops and mushrooms in white wine sauce.)

But transmission delay will become a problem. The limitation of the speed of light may create a serious difference between Real Time and Event Time. So the cooking may become altogether automatic, with menus for hundreds of meals punched into the automatic kitchen's program tape. The galley itself will look like an IBM hardware committee and the meals will pop out of its maw with distressing punctuality. Our space menu would look something like this on the tape—:: .:

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::: .:. .. :.: ::.:: :..: .:.: : (Incidentally, the symbol .:.: is our peach enflamed by the fire of hell.)

Here the mind again ferments with story possibilities. One sees a saboteur from a rival line sneaking on board the ship, armed with a punch-cutter, and mutilating the menu with extra holes. Punch-Punch, and *Le Coulibiac de Saumon Imperial* is transformed into boiled Brussels Sprouts by that fiendish fink. Or one sees a spaceship arriving from Pluto to discharge fifty haggard, whimpering passengers. "Good God!" the spaceport superintendant cries to the half-dead pilot. "What happened?"

"S-Something wrong with the food tape," the pilot stammers. "N-Nothing but rice pudding for a hundred and nine days."

As voyages into space last longer, ships may carry their living supplies with them, food in miniature developed by mad, brilliant breeders. Turkeys may be crossed with sparrows to produce "Spurkeys" or "Turrows." You can take off with twenty in a small cage and they'll multiply like crazy because their life-cycle will also be miniaturized. Cattle may be crossed with hares to breed "Hattle" which provide delicious steaklets and choplets and . . . and something smaller than a Standing Rib Roast—"Crouching Rib Roast?"

(Me, I'm hoping for "Throose" developed by a demented dwarf in Strassburg who will be the first to mate a goose with a thrush. This gourmetkin will feed them finely minced shallots and butter so that their featherkins will come out as *foie gras.*)

Miniature fruits and vegetables that ripen in a week will be grown in pots before the sunside ports. Think of corn crossed with rice . . . "Rorn?" "Crice?" Asparagus brought down to the size of chives . . . "Charagus?" Potatoes crossed with peas. And while we're miniaturizing, what about a goldfish bowl swarming with "Stuppies" (sturgeon crossed with guppies), which also produce pinpoint caviar?

Five hundred years from now, General Foods and Continental Can will merge and astonish the Space Age by crossing food with plastics (don't ask me how) to produce edible food containers in fruit, fish, meat, fowl, and vegetable flavors. The label will be printed with InstWine, of course, and the top of the container will be microgrooved so that you can listen to music while you dine.

There won't be any galley. There'll be a sort of juke box in the main salon, popping out containers. I can anticipate perplexities about assortment planning which may confront the Muzak-Kosher Kolonel A&R man. There may be an unexpected demand for No. B-16, "Boogie-Woogie On St. Louis Blues" by Earl (Pappy) Hines, which contains *La Poularde Froide Isabelle de France,* whereas the popular No. A-107, *La Cotelette de Volaille à la Kiev,* with gems from Lawrence Welk, suddenly has no takers.

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In any case you'll probably pay for your meals with coins in the slot, mostly to prevent food wastage by music freaks. Again one senses tremendous story possibilities. Can't you visualize a brutal drama about a shipload of The Beautiful People slowly starving to death because their small change has disappeared? The officers can't lend them coins because they're trying to ferret out a crazed coin kleptomaniac in the crew. The steward doesn't dare break into the Juke Box ("Jood Box?") because it's the sacrosanct property of the Muzak-Kosher Kolonel franchise. Then, Act II, Scene 2, the dumb ingenue finds a forgotten coin in her purse. Act III: A scathing revelation of the cast's real character, selfishness, greed, jealousy, envy, as they battle over the final selection.

A thousand years from now the space lanes will be cluttered with discarded debris; garbage, bottles, containers, rejected entrées, overdone vegetables, fatigued salads, mildewed fruits, etc., jettisoned by spacecraft and still floating in nowhere. (Not altogether absurd. Could Columbus believe what a sewer the Atlantic would become in less than five centuries?) Somewhere around 2976 A.D. the ultimate miracle may take place.

Exposed to the radiation of the entire electromagnetic spectrum pervading space, seeds, pips, fruit stones, leaves and cuttings may mutate and begin to grow in the nuclear mulch. Fantastic varieties may develop. I can see the astonishment on the flight deck when a ship whips past a thriving Spapple (Space Apple) orchard 900 million miles from the solar system, or plowing (unaware) through a mutated cranberry bog, only to catch hell from the spaceport supervisor because the ship's put down blotched with scarlet stains.

I can hear the heated exchange between pilot and supervisor in the language they'll probably speak a millennium from now:

"1100101!"
"1010100!"
"110"
"101"
"1?"
"0!"

Imagine the reaches of space slowly filling with floating clouds of fantastic mutations; flowers, fruits, vegetables, grains, all growing like epiphytes on the particle winds that blow through the universe. Can you see spaceships on long journeys stopping alongside these fields to replenish supplies, rather like the adventuring Vikings who made such a stop and stumbled on Nova Scotia? Can you conceive of the taste of these new foods and the exciting new haute cuisine they may inspire in space?

I can't but I'm sure that it'll be a hell of a lot more savory than Chlorella, the algae we're probably doomed to eat in the future, on Earth and out in space. I know. I've tasted *Chlorella au laboratoire.*

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NOTES TO A SCIENCE FICTION WRITER

BEN BOVA

Straight from the shoulder talk to the short story writer from the Editor of Analog

". . . in story after story I see the same basic mistakes being made, the same fundamentals of story-telling being ignored . . . simply because the writer has forgotten—or never knew—the basic principles of story-telling."

Ben Bova discusses vital aspects of the science fiction short story—character—background—conflict—plot—and more!

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Janet Aulisio

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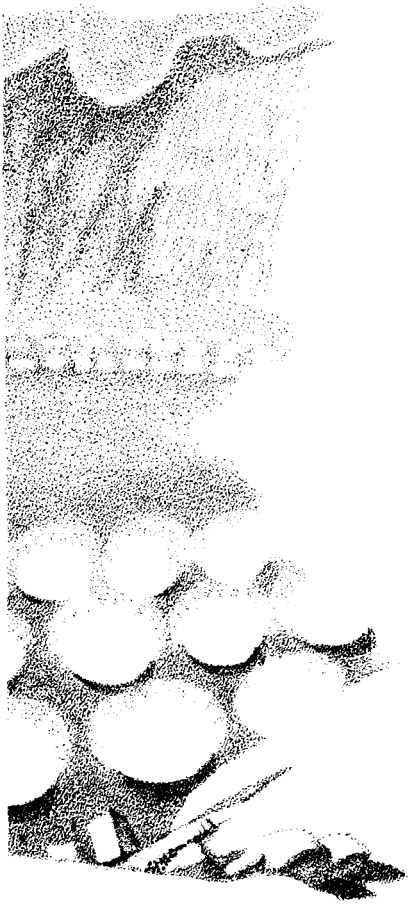
child of the sun

Some reactions cannot proceed at a useful pace without a catalyst. ***James Gunn***



Ten thousand suns burned in the valley as Ellen McCleary climbed from the desert past the staff village to the cottage on the hills above the project.

Ten thousand giants bestrode the mountains holding lightning in either hand as she opened the cottage door and moved into the cool darkness calling, "Shelly? Shelly? I'm home. Where are you? Michelle? Mrs. Ross?"

Ten thousand trumpets shouted in her ears as she read the message scribbled redly across her bathroom mirror—and moments later found the housekeeper, tied and gagged with her own stockings, behind her bed.

He never knew whether he was troubled by memory or nightmare.

Every few weeks he dreamed about a pendulum. It swung back and forth like the regulator on a clock. He sensed the movement and he heard a sound, not a tick but a swoosh, as if something were moving rapidly through the air. At first he had only a vague impression of things, but gradually details forced themselves into his awareness. The

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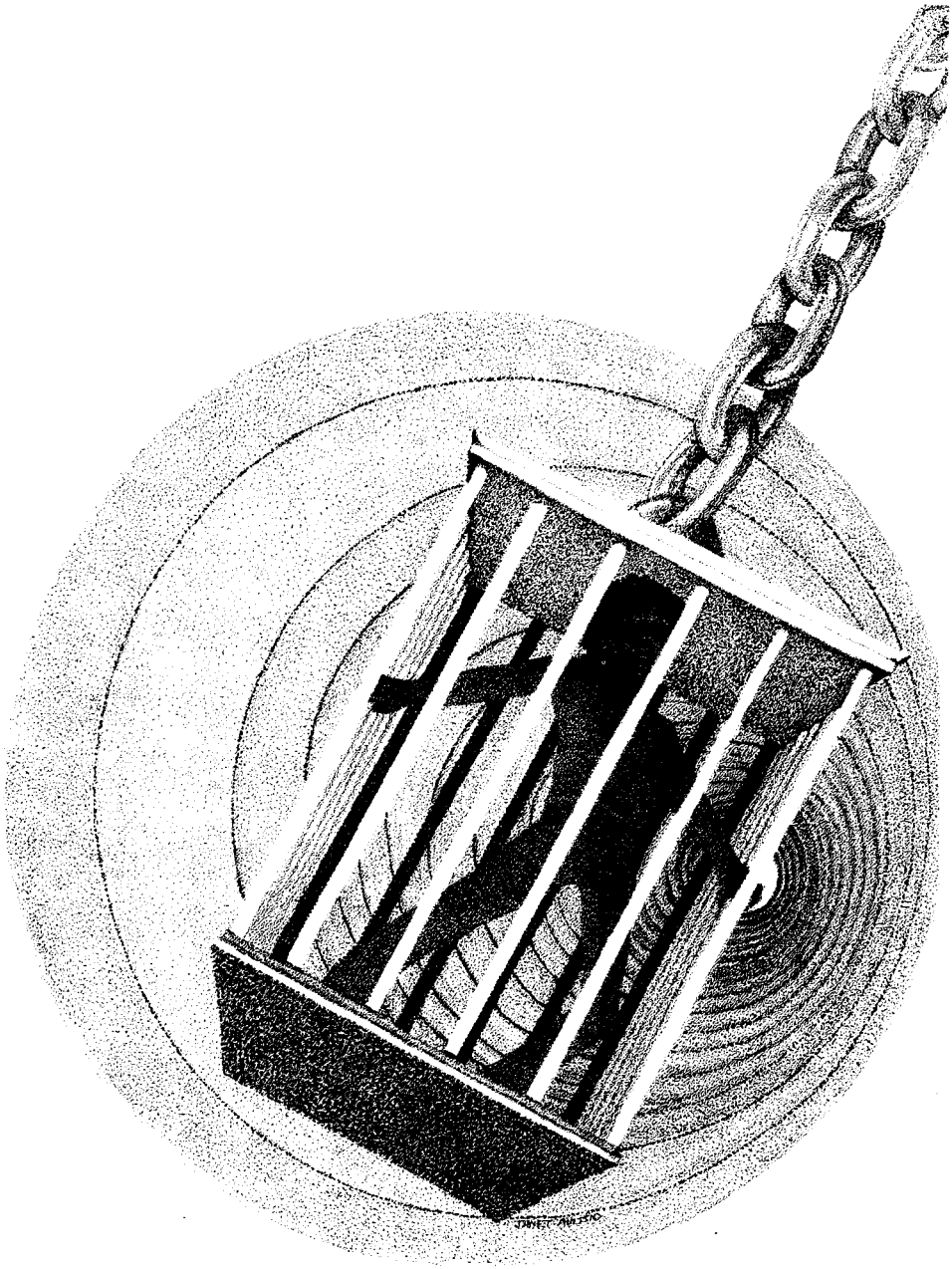

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pendulum arm, for instance, was more like a silvery chain with wires running through it down to the weight at the end.

Then scale became apparent. The entire apparatus was big. It swung in a cavern whose sides were so distant they could not be seen, and the wires were thick, like busbars. The weight was a kind of cage, and it was large enough to hold a person standing upright. Somewhere, far beyond the cavern, unpleasantness waited. Here there was only hushed expectancy.

In his dream he could see only the glittering chain and the cage; it swung back and forth, and at the end of each swing, where the pendulum should have slowed before it started its return, the cage blurred as if it were swinging too fast to be seen.

At this point he always realized that the cage was occupied. He was in the cage. And he understood that the pendulum marked not the passage of time but a passage through time.

The dream always ended the same way: the cage arrived with a barely perceptible jar, with a cessation of motion, and he woke up. Even awake he had the sense that somewhere the pendulum still was swinging, he still was in the cage, and eyes were watching him—or perhaps a single eye, like a camera, that occasionally revealed to him a scene of what might be. . . .

He opened his eyes. He was lying on a bed. The sheets and blankets were tangled as if he had been thrashing around in his sleep.

He looked up at the ceiling. Cracks ran across the old plaster like a map of a country he did not recognize. On his left a window let a thin, wintry light through layers of dust. On the right was the rest of the room: shabby, dingy, ordinary. In the center of the room was a black-and-white breakfast table made of metal and plastic; pulled up to it were two matching metal chairs. Beyond the table, toward what appeared to be the door to the room, was a black plastic sofa; a rickety wooden coffee table stood in front of it, and a floor lamp, at one end. Against the left wall was a wooden dresser whose walnut veneer was peeling and, beside it, an imitation walnut wardrobe. Against the right wall was another door which led, no doubt, to a bathroom. Next to the door four-foot partitions separated from the rest of the room a stove, a sink, a refrigerator, and cabinets.

Newspapers advertised it as a studio apartment; once it was called a kitchenette.

The man swung his legs out of bed and sat up, rubbing the sleep out of his face with open hands. He appeared to be a young man, a good-looking man with brown, curly hair and dark eyes and a complexion that looked as if he had been out in the sun. He had a youthful innocence about him, a kind of newly born awareness and childlike interest in everything that made people want to

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talk to him, to tell him personal problems, secrets they might have shared with no one else.

But after meeting him what people remembered most was his eyes. They seemed older than the rest of him. They looked at people and at things steadily, as if they were trying to understand, as if they were trying to make sense out of what they saw, as if they saw things other people could not see, as if they had seen too much. Or perhaps they were only the eyes of a man who often forgot and was trying to remember. They looked like that now as they surveyed the room and finally returned to the table and the hand-sized tape recorder that rested on it.

He stood up and walked to the table and looked down at the recorder. A cassette was in place. He pushed the lever marked "Play." The cassette hissed for a moment and then a man spoke in a clear, musical voice but with a slight accent, like someone who learned English after adolescence and speaks it better than the natives.

"Your name is Bill Johnson," the voice said. "You have just saved the world from World War III, and you don't remember. You will find stories in the newspapers about the crisis through which the world has passed. But you will find no mention of the part you played.

"For this there are several possible explanations, including the likelihood that I may be lying or deceived or insane. But the explanation on which you must act is that I have told you the truth: you are a man who was born in a future which has almost used up all hope; you were sent to this time and place to alter the events that created that future.

"Am I telling the truth? The only evidence you have is your apparently unique ability to foresee consequences—it comes like a vision, not of the future because the future can be changed, but of what will happen if events take their natural course, if someone does not act, if you do not intervene.

"But each time you intervene, no matter how subtly, you change the future from which you came. You exist in this time and outside of time and in the future, and so each change makes you forget.

"I recorded this message last night to tell you what I know, just as I learned about myself a few weeks ago by listening to a recording like this one, for I am you and we are one, and we have done this many times before. . . . "

After the voice stopped, the man called Bill Johnson picked up a billfold lying beside the recorder; near it were a few coins, a couple of keys on a ring, and a black pocket comb. In the billfold he found thirty-six dollars, a BankAmericard and a plastic-encased Social Security card both made out to Bill Johnson, and a receipt for an insured package dated three days before.

He tossed the billfold back to the table, walked to the stove, ran a little

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water from the hot water tap into a teakettle, and put it on the stove. He turned on the gas under it and tried to light it several times before he gave up and turned the knob off. He went into the bathroom, came out a few minutes later, and opened the front door. A newspaper lay on the dusty carpet outside. He picked it up, shut the door, and turned on the overhead light. The bulb burned dimly, as if the current was weak. He made himself a cup of instant coffee with tap water and took it to the table.

The newspaper was thin, only eight pages. The man leafed through it quickly before he stopped at one item, stared at it for a long moment as if he were not so much reading it as looking through it, tore it out, folded it, and put it into the billfold. He stood up, went to the dresser, put on his clothes, removed a scratched plastic suitcase from the top of the wardrobe, and put into it two extra pairs of pants, three shirts and a jacket, and a handful of socks and underwear; he put his dirty clothes into a paper sack and packed it, remembered the tape recorder, closed the suitcase, picked up the assorted objects on the table and slipped them into his pockets, and walked to the door.

He looked back. The room had been ordinary before. Now it was anonymous. A series of nonentities had lived here, leaving no impression of themselves upon their surroundings. Time itself in its passage had left a cigarette burn on the table, torn a hole in the cushion of a chair, ripped the sofa, scratched the coffee

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tables and the walls and the doors a thousand times, deposited loesses of dirt and lint in the corners and under the bed.

Johnson smiled briefly and shut the door behind him.

Downstairs he stooped to drop the keys on the ring into the mail slot in the door marked with a plaque on which was spelled out the word: Manager. Just after the keys hit the floor, the door opened. Johnson found himself looking into the face of a middle-aged woman. Her gray hair was braided and wound around her head; her face was creased into a frown of concern.

"Mr. Johnson," she said. "You're leaving? So sudden?"

"I told you I might." His voice was the voice he had heard from the tape recorder.

"I know. But—" She hesitated. "I thought—maybe—you were so good to my daughter when she had—her trouble—"

"Anyone would have wanted to help," he said.

"I know but—she thought—we thought—"

Johnson spread his hands helplessly, as if he saw time passing and was unable to stop it. "I'm sorry. I have to leave."

"You've been a good tenant," the woman said. "No complaining about the brownouts, which nobody can help God knows, or the gas shortages. You're quiet. You don't take girls to your room. And you're easy to talk to. Mr. Johnson, I hate to see you go. Who will I talk to?"

"There are always people to talk to if you give them a chance. Goodbye," he said. "May the future be kind."

Only when Bill Johnson was alone did he feel like a person. When he was with people he felt that he was being watched. Those occasions had a peculiar quality of unreality, as if he were an actor mouthing lines that someone else had written for him and he was forced to stand off and watch himself perform.

Seeing himself at the corner of the block, wind-swept paper and dust swirling around his legs, waiting without impatience for a city bus to come steaming around the corner. Sitting uneasily over torn plastic, protecting the seat of the pants from the sneaky probe of a broken spring, arriving at last at the interstate bus terminal surrounded by buildings with plyboarded windows scribbled with obscene comments and directions. Purchasing, with the aid of his credit card, a ticket automatically imprinted with a Las Vegas destination; waiting in a television-equipped chair—the viewer long broken and useless—until a faulty public address system announced the departure of his bus in words blurred almost beyond understanding.

Hearing the unending whine of tires on interstate concrete, broken only by chuckhole thumps and the stepdown of gears as the bus pulled off the highway for one of its

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frequent stops to expel or ingest passengers, to refuel with liquified coal and resupply with boiler water, to allow passengers to consume lukewarm food at dirty bus stations or anonymous diners. Enduring the procession of drowsy days and sleepless nights. Watching people enter and depart, getting on, getting off, individual worlds of perceptions and relationships curiously intersecting in this other world on wheels careening down the naked edges of the world.

Feeling bodies deposited in the seat beside him, bodies that sometimes remained silent, unanimated lumps of flesh, but sometimes, by a miracle as marvelous as the changing of Pinocchio into a real boy or the mermaid into a woman, transforming themselves into feeling, suffering, rejoicing, talking people.

Listening to the talk, this imperfect mechanism of communication, supplemented in the light by gesture and expression and body position, anonymous in the night but perhaps thereby as honest as the confessional.

Between conversations on his rolling world, the man named Bill Johnson occasionally removed a newspaper clipping from his billfold and read it again.

CALIFORNIA GIRL ABDUCTED

Death Valley, CA (AP)—The four-year-old daughter of Ellen McCleary, managing engineer of the Death Valley Solar Power Project, was reported missing today.

McCleary returned from her afternoon duties at the Project to discover her housekeeper, Mrs. Fred Ross, bound and gagged behind her own bed and the McCleary girl, Michelle, gone from the home.

Authorities at the Project and the local sheriff's office have refused to release any information about the possible abductor, but sources close to the Project suggest that oil interests have reason to desire the failure of the Project.

McCleary was recently divorced from her husband of ten years, Stephen Webster. Webster's location is unknown.

Authorities will neither confirm nor deny that the abductor left a message behind.

Below the hill the valley was a lake of flame as Bill Johnson climbed toward the cottage some two hundred yards from the little group of preformed buildings he had left behind. Then, as the path rose, the angle of vision changed and the flame vanished, as if snuffed by a giant finger. Now the valley was lined with thousands of mirrors reflecting the orange-red rays of the dying sun toward a black cylinder towering in their center.

The air coming up the hill off the desert was hot, like a dragon's breath, and brought with it the scent of alkali dust and the feeling of fluids being sucked through the skin until, if the process continued long enough, only the dessicated husk would be left behind for the study of future archeologists. Johnson knocked on the door of the cottage. When there was no answer he knocked again, and turned to look at the valley, arid

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and lifeless below him like a vision of the future.

A small noise and an outpouring of cool air made him turn. In front of him, in the doorway, stood a middle-aged woman with a face as dry as an alkali flat.

"Mrs. Ross?" Johnson said. "I'm Bill Johnson. I talked on the telephone to Ms. McCleary from Las Vegas, but the connection was bad."

"Ms. McCleary gets lotsa calls," the woman said in a voice like dust. "She don't see nobody."

"I know that," Johnson said. He smiled understandingly. "But she will want to see me. I've come to help in the disappearance of her daughter."

Mrs. Ross was unmoved. "Lotsa nuts bother Ms. McCleary about stuff like that. She don't see nobody."

"I'm sorry to be persistent," Johnson said, and his smile illustrated his regret, "but it is important." His body position was relaxed and reassuring.

The housekeeper looked at him for the first time and hesitated about closing the door. As she hesitated, a woman's voice came from within the darkened house, "Who is it, Mrs. Ross?"

"Just another crank, Ms. McCleary," the housekeeper said, looking behind her, but grasping the door firmly as if in fear that Johnson would burst past her into the sanctity of the cool interior.

Another woman appeared in the doorway. She was tall, slender, dark, good-looking but a bit haggard with concern and sleeplessness. She stared at Johnson angrily as if she blamed him for the events of the past few days. "What do you want?"

"My name is Bill Johnson," he said patiently. "I called you from Las Vegas."

"And I said I didn't want to see you," McCleary said and started to turn away. "Shut the door, Mrs. Ross—" she began.

"I may be the only person who can get your daughter back for you," Johnson said. It was as if he had leaned a hand against the door to keep it from closing.

The tall woman turned toward him again, her body rigid with the effort to control the anxiety within. Johnson smiled confidently but without arrogance, looking not at all like a nut or a crank or a criminal.

"What do you know about my daughter?" McCleary demanded. Then she took a deep breath and turned to Mrs. Ross. "Oh, let him in. He seems harmless enough."

"The sheriff said not to talk to anybody," the housekeeper said. "The sheriff said you was to—"

"I know what the sheriff said, Mrs. Ross," McCleary interrupted. "But I guess it won't matter if I talk to this person. Sometimes," she continued, her voice detached and distant, "I have to talk to somebody." She brought herself back to this place and time. "Let him in and go stand

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by the telephone in case I find it necessary to call the sheriff." She looked at Johnson as if warning him against making that step necessary.

"I wouldn't want you to do that," he said submissively, and moved forward into darkness. More by sound than sight he followed her footsteps down a hallway into a living room where returning vision and the light filtering through closed drapes over a picture window let him make his way to an upholstered chair. McCleary sat stiffly on the edge of a matching sofa; it was covered with velvet with variable-width stripes of orange and brown and cream. She lit a cigarette. The lingering odors of stale smoke and a littered ashtray on the glass-covered coffee table in front of her suggested that she had been smoking one cigarette after another.

"What do you know about my daughter?" she asked. She was under control now.

"First of all," he said, "she is an important person." He held up a hand to forestall her questions. "Not just to you, overriding as that may be at the moment. Not just because she is a person in a society that values every individual. But because of her potential."

"What do you know about that?" she demanded. A note of doubt had crept into her voice.

"It's hard to explain without making me seem like a crackpot or a fool," Johnson said, leaning toward her to emphasize his sincerity. "I have—special knowledge—which comes to me in the form of—visions."

"I see." Doubt had crystallized into certainty. "You're a psychic."

"No," Johnson said. "I told you it was difficult. But if that's the way you want to think of it—"

"I've had dozens of letters and telephone calls from psychics since my daughter was abducted, Mr. Johnson, and they've all been phonies," she said coldly. "All psychics are phonies. I think you'd better go." She stood up.

He stood up along with her, not submitting to, but resisting his dismissal. He looked into her eyes as if his eyes had the power to compel her belief. "I think I can find your daughter. I think I know how to get her back. If I thought you could do it without my help, I wouldn't be here. I want you to know that I could find myself in great difficulties and my mission in jeopardy."

"Where is my daughter?" It was not the tone of belief but of a final examination.

"With your husband."

"You guessed."

"No."

"You know about the message."

"Was there a message?"

"You're from Steve. He sent you."

"No. But I sense danger to your daughter and perhaps to your husband as well."

She slumped back to the sofa. "What are you then?" she asked.

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"Are you just a confidence man?" Her tone was pleading, as if it would comfort her if he admitted her guess was right. "What do you want from me? Why don't you leave me alone?" If she had been a more dependent person she might have turned her face from his and cried.

"All I want is to help you," he said, sitting down again, reaching toward her with one hand but not touching her, "and to help you find your daughter."

"I don't have any money," she said. "I can't pay you. If you're preying on my helplessness, it won't gain you anything. If you're seeking notoriety, you will be exposed eventually."

"None of these things matter beside your daughter's safety and her future. Besides, you may not be able to control the events of your life as you have been accustomed to doing, but you are not helpless. I don't want any money. I don't want any word of my part in this to get out to anyone, and certainly not to the press. It would be dangerous to me."

"Then what do you want?"

"I want to get to know you," he said, and as she stiffened he hastened on, "so that I can find your daughter." His glance moved around the room as if he were looking at it for the first and the last time. At the picture window that looked out over the desert valley and the solar power project when the drapes were drawn. Michelle had stood there and watched for her mother's return. At the electronic organ in the corner that neither McCleary nor her daughter could play. At the doors that led to bedrooms where a woman and a man had slept and made love and lain awake in the night. At other doors that led to baths, to the hall, to the kitchen and dining room on the other side of the hall. "I want information about your work, your daughter, your husband, the circumstances of your daughter's abduction—"

She sighed. "Where do you want to start?"

"The message. What did it say?"

"The sheriff told me not to describe it to anyone. He said that knowledge of it would either be guilty knowledge or proof of the abductor's identity."

"You've got to trust somebody some time," Johnson said.

"And the police are not to be trusted, Mr. Johnson?" Through her concern flashed the perceptiveness that had made her director of a major research project.

"From the police you get police-type answers," he said. "Investigation, surveillance, evidence, apprehension. I think you want something else—your daughter back safely and preferably without your husband—"

"My former husband," she corrected.

"Your former husband's injury or punishment."

"Ms. McCleary," said the voice of Mrs. Ross from the hall doorway,

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"the sheriff is here to see you."

"Thank you, Mrs. Ross," McCleary said.

"Come in, sir," Johnson said. "I've been expecting you."

He was held a prisoner in the little room off the cafeteria, with its mahogany-grained plywood walls decorated with framed prints of famous race horses. "Horsepower," he said once, almost to himself.

Finally he induced the young engineer who was guarding him to talk about the project, to describe the difficulties as well as the successes, to admit that the project was not the answer to the energy problem. The answer was hydrogen fusion, the true sunpower, the solar process itself. Only hydrogen fusion would supply enough energy to save civilization from a long slide backward into a horsepower-agricultural society, with all the interim riots, desperation, and death; only hydrogen fusion would get humanity going again, improve living conditions on Earth beyond the reach of envy, bring within man's grasp the planets and perhaps the stars. . . .

But the scientists hadn't got the hang of it yet, and until they did people like the engineer had to keep plugging away at whatever they could do to help.

The engineer was a dreamer. Bill Johnson was a visionary. He knew what was coming, but the engineer jumped when the knock came at the door, like the future announcing itself. It was Ellen McCleary. She led Johnson out of the cafeteria building, not saying anything, her back stiff and uncommunicative.

Outside the day had turned to night. The stars had come out, bright and many-colored, and the Milky Way streamed across the sky like a jeweled veil. The reflected heat from the desert below seemed friendly now against the cool evening breeze pouring down from the hills.

Death Valley, deep and arid basin (Badwater, 280 feet below sea level, is the lowest point in the Western Hemisphere), has alkali and salt flats, briny pools, grotesque rocks, and an annual average rainfall of 1.4 inches.

Ellen McCleary stopped a few yards from the cafeteria building and turned to face Johnson. "I guess you think I'm a silly woman, not able to know her own mind, first having you arrested and then setting you free."

"I may think many things about you but not that you're a silly woman," Johnson said. "That battle has been won; you don't have to keep fighting it. Your presence here as director of this project is proof of that."

"I thought about it," she said, shrugging off his interruption but not looking at him, "and I decided that I couldn't throw away the chance that you might be able to help. If I can get Shelly back—" She didn't finish the sentence. Instead she held out an oblong of stiff white paper. It was a Polaroid snapshot.

He took a few steps back into the

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light that streamed through the front window of the cafeteria building. The picture showed writing—red, broad, smeared—against a shiny black background.

"He wrote it on the bathroom mirror with my lipstick," she said.

Johnson read the message:

Ellen—The Court gave Shelly to you, but I'm going to give her what you never could—the full-time love of a full-time parent.

"Is that your former husband's handwriting?" Johnson asked. He seemed to be looking through the picture rather than at it.

"Yes. His language, too. He's a madman, Mr. Johnson."

"In what way?"

"He—" She paused as if to gather together all the fugitive impressions of a life with another person. She took a deep breath and began again. "He thinks that the way he feels at the moment is the only thing that matters. That he may feel differently tomorrow or even the next moment doesn't count. He'd be willing to kill himself—or Shelly—if he felt like it at the moment." She let her breath sigh out. "That's what I'm afraid of, I guess."

"Are you sure he's homicidal?"

"I'm making him sound crazier than he is, I know, but what I'm trying to say is that he's an impulsive person who believes that people should only do what feels right to them. He doesn't believe in the past or the future. Now is the only thing that exists for him. He thinks I'm cold and unfeeling, and I see him as childish, and—but I'm talking as if you're a marriage counselor. We tried that, too."

They talked together now in the darkness, two voices without faces, sound without body. "That's all right," Johnson said. "It helps me get the feel of things. Did he have a profession, a talent, a job?"

Her voice held the hint of a shrug. "He was a bit of a lot of things—a bit of a painter, a bit of a writer, a bit of an actor, but a romantic all the time. What really broke things up, though, was when this project got started and I was selected as director. I was in charge, and he was just—around. He had nothing to do, and conditions were pretty primitive for a while. That's when Shelly was conceived——as sort of a sop to his manhood. But it didn't last. He left for a few months when Shelly was about a year old, came back, we quarreled, he left again, and finally I divorced him, got custody of Shelly, and that's about it."

"Not much for what—ten years of marriage?"

"Yes." She sighed. "Shelly is all, and he's taken her."

"Where did you meet?"

"In Los Angeles. At a party at a friend's house. I was a graduate student at Cal Tech; he was an actor. He seemed romantic and strong. I was—flattered, I guess—that he was interested in me. We got married in a whirlwind of emotion, and it was great for a few months. Then things

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began going bad. I irritated him by worrying about my career, by wanting to talk about where we were going to be next year, ten years from now. He annoyed me by his lack of concern for those things, by his unrelenting demands upon my time, my attention, my emotions. Part of my emotions were invested in other things—in my work, for one—and he could never understand that, or forgive it."

"I understand," Johnson said. "The times your husband left—did he return to Los Angeles?"

"I think he did the first time, although we weren't communicating too well then. But that's where he said he'd been when he came back."

"The second time?"

"I don't know. We didn't communicate at all until the divorce, and then it was through lawyers. Until that." She indicated the photograph in Johnson's hand, a shadowy finger almost touching the white rectangle.

He held it in his fingertips, almost as if he were weighing it. "I suppose the police checked all his friends in Los Angeles."

"And his relatives. That's where he was born and grew up. But they didn't find anything. Nobody has seen him recently. Nobody knows where he might have gone with Shelly."

"Did he have any hobbies?"

"Tennis. He liked tennis. And parties. And girls." The last word had an edge of bitterness.

"Hunting? Mountain climbing?" Johnson's words were tentative, as if he were testing a hypothesis.

She seemed to be shaking her head. "He didn't like the outdoors. Not raw. If he'd liked to hike or hunt, he still might be here," she said ruefully. The blur of a hand gestured at the mountains that rose to the east and the north and the west of them.

"He sounds restless," Johnson said. "Could he stay in one place for long at a time? If he starts moving around, the police will find him."

"He never has been able to stay still before, but if he thought that was the only way to hurt me he might be able to do it."

"Is Mrs. Ross sure he's the one who tied her up?"

"She never knew Steve. I hired her after he left. But she identified his picture."

"There was nobody else with him? Nobody who might be making him do what he did?"

"Not that she could tell. She said he seemed cheerful. Whistled while he tied her up. Said not to worry, I would be back at six o'clock—that I was like a quartz watch, always right on the second. He hated that." She paused and waited in the darkness. When he didn't say anything, she asked, "Is there anything else?"

"Do you have any of his personal belongings?"

"I threw them out. I didn't want anything to remind me of him. Or to remind Shelly either, I guess. Except

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this." She handed Johnson another white oblong.

He took it into the light. It was the picture of a blond young man in tennis clothing, looking up into the sun with the net and court behind him, squinting a little, laughing, strikingly handsome and vital and alive, as if time had been captured and made to stand still for him and he would never grow old.

"Can I keep the pictures?" Johnson asked.

"Yes," she said. Her disembodied voice held a nod. "Can you find Shelly for me?"

"Yes," he said. It was not boastful nor a promise but a statement of fact. "Don't worry. I'll see that she gets back to you." That was a promise. "May the future be kind," he said. Then he walked out of the light into the darkness. His footsteps sounded more distant on the path until the night was still.

Los Angeles was a carnival of life, a sprawling, vivid city of contrasts between the rich and the poor, between the extravagant and the impecunious, between mansions and slums.

Los Angeles, founded 1781, cattle ranching center under Spanish and Mexicans, expanded with railroads, oil, motion pictures, and aircraft manufacturing, obtains water from Colorado and Owens Rivers and Mono Basin, and power from Hoover Dam.

The smog was gone, removed not so much by the elimination of automobile exhaust fumes but by the elimination of the automobile. Except for the occasional antique gasoline-powered machines that rolled imperiously along the nearly deserted freeways, the principal method of transportation was the coal-fueled steam-powered bus. The smokestacks, too, had been stopped, either by smoke and fume scrubbers or by the Depression.

Watts was sullen. Unlike an earlier period when minorities felt that they were being cheated of an affluence available to everyone else, the citizens shared what was clearly a widespread and apparently growing distress and general decline in civilization. The riots of discrimination were clearly past, and the riots of desperation had not yet begun.

Through this strange city went a man who did not know his name, troubled by a past he could not remember and visions of a future he could not forget, trying to put together a portrait of a man who had as many images as there were people who knew him, seeking the vision that would reveal a place where a man and a child might be unnoticed, asking questions and getting always the same replies.

At a Spanish bungalow with peeling-pink stucco. "No, we don't know him."

At a walled studio with sagging gates, echoing sound stages, and decaying location sets that looked like a premonition of the society

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outside its walls, "No, we haven't used him in years."

At a comfortable ranch house in the valley, surrounded by orange trees, "The police have been here twice already. We've answered all their questions."

At a tennis club still maintaining standards and the muted sprong-sprong of court activity, "He hasn't been around for months."

At a high school where hopeless teachers tried to impart knowledge whose value they no longer found credible to listless students who were there only because society had no other place for them, "We can show you only the yearbooks," and in them pictures of a face without character and listings of activities without meaning.

And then, unexpectedly, at a bar along the Strip, half facade and half-corrupt, like a painted whore, "Yeah, I seen him a couple of months ago, him and a fellow with a cap on—you know one of those things with a whatchamacallit on the front—yeah, a visor—like a sea captain, you know—yeah, Gregory Peck as Captain Ahab. Reason I remember—it wasn't his style, you know. It was always girls with him. You could see him turn up the charm like one of those things that dim and brighten lights—a rheostat?—yeah, I guess. With guys he was cool, you know?—like he didn't care what they thought of him. But with this guy it was different. Like he wanted something from the guy. No, I didn't hear what they was talking about. I had sixty-seventy customers in here that night. The noise you wouldn't believe sometimes. You're lucky I remembered seeing him."

A search of the dock area, all up and down the coast, until finally at the small boat marina near Alamitos Beach State Park, a marina with many empty docks, "Steve? Sure, he borrowed my cruiser for a couple of hours about two weeks ago. No, he didn't tell me where he was going, but I trusted him and he brought it back. Of course I didn't think he was running dope past the border. There's no point in that now, is there? What with the new laws and everything? Anyway, he was gone only a couple of hours. Well, I gave him the keys about one o'clock in the afternoon, and he was back with them before four. Sure I'm certain about the time. I remember—I told him I was having a party on board that evening, and I had to get her cleaned up and provisioned. Matter of fact, I asked if he wanted to join the party—a guy like Steve gives a party real class, and the girls come back—but he couldn't. You can push her up to thirty knots, but she's a real fuel eater at that speed. No, I didn't see anybody with him. May have been, but I didn't see anybody. Want to look at the boat? Why not? I bought it from a fellow in Long Beach five years ago when fuel got so expensive. Now I hardly ever go out in it. Use it sort of like a floating bar and bedroom . . ."

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Brass rails, gleaming teak decks, white paint shining in the sun, the spoked wheel, touch it, feel its response, sense the directions it has gone, the hands that have held it and steered the boat. The cabin below, all compact and efficient, bunks and tables, kitchen and head, immaculate, haunted by ghosts, crowded together here laughing, crying, drunken, reckless, desperate . . .

And back to the dock, certain now, seeing a vision of a place available by water within an hour's range of the cruiser, at most thirty nautical miles from the small boat marina . . .

And at the head of the dock, waiting for him, a tall, slender woman, dark-haired, dark-eyed, good-looking but a bit more haggard now. "So," she said, "he took her away by water. I would never have suspected him of having that much imagination."

Johnson looked at her and saw the past. "You didn't give him credit for much."

"You don't seem surprised at seeing me," she said.

"No."

She hesitated, looking down at her feet in their red canvas shoes that matched her red slacks. "I guess I owe you an apology," she said finally.

"No."

"I suspected you," she went on, looking up at him, letting him see her guilt. "The police suspected you too—of having had some contact with Steve, of being his emissary, at least of knowing him, perhaps where he was living, perhaps being willing to sell him out."

"You have reason to suspect people," Johnson said. The odor of fish and oily salt water surrounded them.

"So we had you followed. And you did the police work to find him. You don't know how difficult this is for me, do you?"

"Yes," he said.

"You did it better than the police. You found him. Maybe you really are what you say you are."

"That's a reasonable assumption."

"The world isn't reasonable," she complained. "People aren't reasonable. You did find him, didn't you? Tell me that you found him."

"I found him," Johnson said simply, "but I haven't gone to him yet. I haven't got Shelly back for you yet."

"I'm not asking you to tell me where he is," Ellen McCleary said, a bit unsteadily, looking at Johnson's face hopefully, "but I'm asking you to take me with you."

"I can get Shelly back without damage to her or your former husband if I go alone," Johnson said. "With you along the chances get much slimmer."

She got angry at that. "Who are you to say? What do you know about him or me or Shelly? What right have you to meddle in our lives?"

"Only the outcome can justify any of us," he said. "Good intentions,

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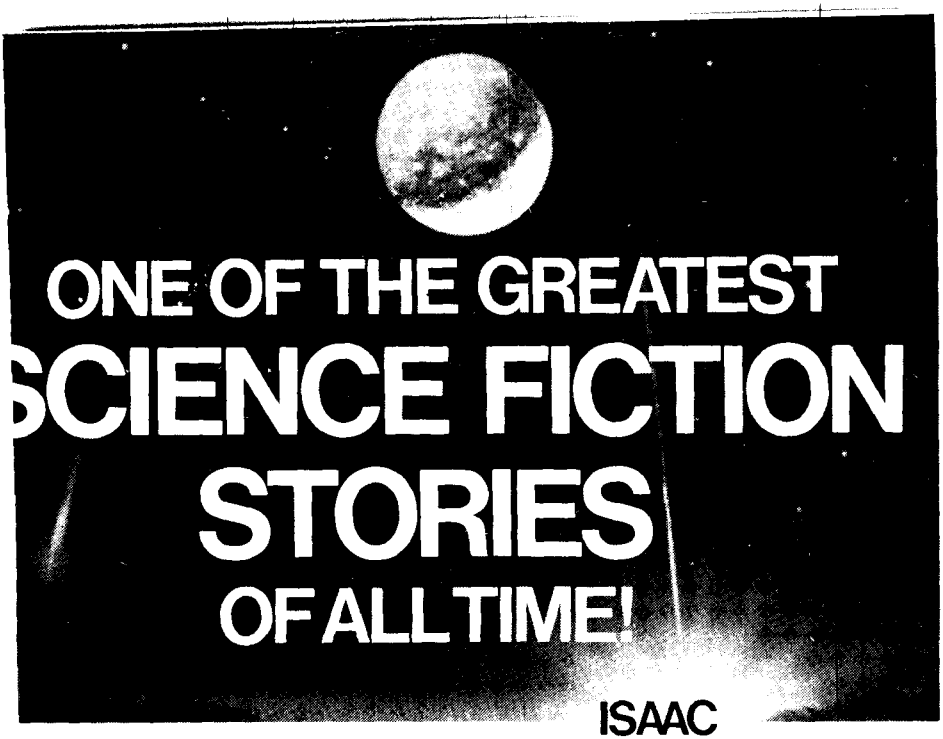

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emotional involvements, rights—all these are only the absolution we give ourselves for lack of foresight. Look out there." He motioned toward the smooth blue swells of the Pacific gleaming with highlights in the sunshine. "Quite a difference from your wasteland. That's fertility. That's promise. We came from the sea, and in the sea lies our future."

"My desert is not as lifeless as it looks," she said. "We get energy from it, energy we need, energy we must have."

"The lowest kind of energy—heat. You waste a lot when you have to pump it up into electricity."

"Like all energy it comes from the sun."

"Not all," he said. The wind was coming in off the ocean and blowing away the old smells of rot and waste. "I won't take you with me. You can have me followed, of course, but I ask you not to do that. What will it be? Your desert of old memories or my sea of hope?"

She shook her head slowly, helplessly. "I can't promise."

"Then neither can I," he said, and left her standing at the edge of the water as he walked quickly to the street and the nearest public transportation.

The ferry ride was a pleasant interlude, a break in the feeling of urgency that drove Johnson. He could not hurry the ship, and he existed for the moment, like the smiling young man in the tennis clothes, outside of time. From San Pedro Bay to Santa Catalina, he watched the blue water curl under the bow, white and playful, and the smooth blue surface of the Pacific extending undisturbed to the end of the world.

Johnson studied it as if he had never before seen the protean sea or the creatures that lived in it—small darting fish like dark shapes changing instantly into silver when pursued by large solitary predators, and distantly, across the horizon, the gray unbelievable backs of whales. The breeze, laden with salt, blew across his face and tugged at his hair and clothing, and he smiled.

He left the ferry at Avalon as soon as the ship had tied up in its slip.

Santa Catalina, discovered in 1542 by Cabrillo, bought in 1919 by William Wrigley and developed as a pleasure resort, has museums, aquarium, bird haven, and casino.

Few people got off the ferry—the pleasure business was an early casualty of the Depression—and Johnson paid no attention to them. He rented a bicycle from a stand at the end of the pier and peddled up the main road among the wooded hills, got off and walked the bicycle where the hills were too steep to ride, stopped for a moment when he had reached the high point, with Black Jack Peak to his right and the Pacific spread out in front of him again like hope regained, then coasted rapidly down the hills, past Middle Ranch and along the west coast where the

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ocean flashed blue between the trees.

Just short of Catalina Harbor, he stopped, pulled the bicycle off the road and behind some trees, and walked up through the woods along a barely discernible path until the trees began to thin and he found himself close to a small clearing. A small cabin stood in the middle of the clearing. As Johnson stood without moving, the sound of a child's happy voice came to him and then a man's deeper voice followed, surprisingly, by a third voice and a fourth, the child's squeal of laughter, and a man's chuckle.

Johnson moved through the last of the trees into the dust of the clearing. Now he could see the front porch of the cabin. On the edge of the porch sat a child with short dark hair and lively blue eyes. She was dressed in a red knitted shirt and dirty jeans. Her feet were bare, her hands were squeezed ecstatically between her knees, and she stared enraptured at finger puppets on the hands of a light-haired young man.

In a hoarse voice the young man chanted:

"Today I'll brew, tomorrow bake;
Merrily I'll dance and sing,
Tomorrow will a baby bring:
The lady cannot stop my game . . ."

The little girl shouted with delight, "Rumpelstiltskin is my name!"

The young man was laughing with her until he saw Johnson. He stopped laughing. The puppets fell off his fingers as he reached behind him. The little girl stopped laughing, too, and looked at Johnson. In repose her face looked a great deal like the face of Ellen McCleary with the young man's blue eyes and spontaneity.

"Hello," Johnson said. He moved forward slowly, like a man moving among wild animals, so as not to frighten them into flight or attack.

"Don't tell me you've come to read the meter," said the young man sitting on the porch, "or that you just wandered here by mistake."

Johnson eased himself down in the center of the clearing with his back to the ocean that gleamed through the trees a deeper blue than the sky. He sat cross-legged and helpless in the dust and said, "No, I came here to talk to you, Steve Webster."

Webster brought his right hand out from behind him. It had a revolver in it. He supported the butt on his knee and pointed it in Johnson's general direction. "If you're from my wife, tell her to leave me alone—me and Shelly—or she'll regret it." Webster's voice was harsh, and the little girl stirred nervously beside him, looking at her father's face, down at the gun, and then at Johnson.

"I've talked to your former wife," Johnson said, "but I'm not here in her behalf alone. I'm here as much for your sake as hers, but mostly for Shelly's sake."

"That's a lot of crap," Webster said, straightening the gun a little.

"You're frightening your daugh-

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ter," Johnson said to him.

"She wasn't frightened before you came," Webster said.

"I realize that you and your daughter have been happy together," Johnson said. He spread his hands as if he were weighing sunbeams on his palms. "But how long can it last? How long before the authorities locate you?"

Webster waved the ugly gun in the air as if he had forgotten he held it. "That doesn't matter. Maybe they'll find us tomorrow, maybe never. Now we're happy. We're together. Whatever happens can never change that."

"Suppose," Johnson said, "it could last forever. You can't always be a little girl and her father playing games in a cabin in the woods. Shelly will grow up without schooling, without friends. Is that the thing to do for your daughter?"

"A man has got to do what he thinks is right," Webster said stubbornly. "Now is all any of us have got. Next month, next year, maybe something else will happen. Something good, something bad—you can't live for that. Nobody knows what's going to happen."

Johnson's lips tightened but Webster didn't seem to notice.

"Nobody's found me yet," Webster said, and then his eyes focused on Johnson again. "Except you." He noticed the gun in his hand and pointed it more purposefully at Johnson. "Except you," he repeated.

The little girl began to cry.

"Wouldn't that spoil it?" Johnson said. "Having Shelly see me shot by her father?"

"Yeah," Webster said. "Run inside the cabin, Shelly," he said, looking only at Johnson. The little girl didn't move. "Go on, now. Get in the cabin." The little girl cried harder. "See what you're making me do?" he complained to Johnson.

Johnson put his hands out in the dust in a gesture of helplessness. "I'm not a threat to you, and you can't save anything by getting rid of me. If I can find you, others can. In any case, you couldn't stay here long. You'll need food, clothing, books. Word about a man and a little girl living here is bound to get out. You'll have to move. The moment you move the police will spot you. It's hopeless, Steve."

Webster waved the gun in the air. "I can always choose another ending."

"For yourself? Ellen said you might do that."

"Yeah?" Webster looked interested. "Maybe for once Ellen was right."

"But that's not the way it ought to be," Johnson said. "You're old enough to make your own decisions, but you ought to leave Shelly out of this. She's got a right to live, a right to decide what she wants to do with her life."

"That's true," Webster admitted. He started to lower the gun to his knee again, and then lifted it to point at Johnson again. "But what does a

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little girl know about life?"

"She'll get bigger and able to make her own decisions if you give her a chance," Johnson said.

"A chance," Webster repeated. He raised the gun until it pointed directly at Johnson, aiming it, tightening his finger on the trigger. "That's what the world never gave me. That's what Ellen never gave me."

Johnson sat in the dust, not moving, looking at the deadly black hole in the muzzle of the gun.

Gradually Webster's finger relaxed. He lowered the revolver to the porch beside him as if he had forgotten it. "But you're not to blame," he said.

"I suppose I'm to blame," a woman's voice said from the edge of the clearing. Ellen McCleary stepped out from among the trees.

Webster seemed surprised and delighted to see her. "Ellen," he said, "it was good of you to come to see me."

"Mommy," Shelly said. She tried to get up and run to her mother, but Webster held her wrist firmly in his hand and would not let her go.

"That's all right, Shelly," Ellen said, moving easily toward the porch where her former husband and her daughter sat. She no longer seemed tired, now that she had reached the end of her search. "Let Shelly go," she said to Webster.

"Not bloody likely," he said.

"Not to me," Ellen said. "Let her go with this man."

Webster glanced at Johnson. Neither of them said anything.

"Let's leave Shelly out of this," Ellen said. "It's between us, isn't it?"

"Maybe it is," Webster said. His fingers loosened on Shelly's wrist.

The little girl had stopped crying when her mother appeared. Now she looked back and forth between her parents, on the edge of tears but holding them back.

"We did it to each other," Ellen said, "Let's not do it to Shelly. She's not guilty of anything."

"That's true," Webster said. "You and I—we're guilty, all right."

"Go to Mr. Johnson, Shelly," Ellen said. Her voice was quiet but it held a quality of command.

Webster's hand fell away, and he pushed the little girl affectionately toward Johnson. "Go on, Shelly," he said with rough tenderness. "That man's going to take you for a walk."

Johnson held out his arms to the little girl. She looked at her father and then at her mother, and turned to run to Johnson.

"That's a kind thing to do," Ellen said.

"Oh, I can be kind," Webster said. He grinned, and his face was warm and likeable.

Johnson got slowly to his knees in the dust of the clearing and then to his feet.

"It's a matter of knowing what kindness is," Webster said.

"If you're fixed in the present,"

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Ellen said. "I suppose that would be a problem."

Johnson took Shelly's hand and began moving out of the clearing.

"Now, now," Webster cautioned, "let's not be unkind. We are put here on this earth to be kind to one another. And we have come together now to be kind to one another as we were not kind before."

Johnson and Shelly had reached the protection of the trees and moved among them. The odor of green growing things rose around them.

"The problem," Ellen said, "is that we don't know what the other one means by kindness. What is kindness to you may be unkindness to me, and the other way around."

As Johnson and Shelly moved down the path, the voices gradually faded behind them.

"Don't start with me again," Webster said.

"I'm not," she said. "Believe me, I'm not. But it's all over, Steve. I didn't come here alone, you know."

"You mean you brought police," he said. His voice was rising.

"I couldn't find you by myself," she said. "But I didn't bring them. You brought them. By what you did. Don't make it worse, Steve. Give yourself up." The rest was indistinguishable. But the sound of voices, louder, shouting, came to them until hands reached out of bushes beside the path to grab them both.

A man's voice said, "You're not Webster."

Another man's voice, on the other side of the path, said, "That's all right, little girl, we're police officers."

A shot came from the clearing some two hundred yards away. For a moment the world seemed frozen—the leaves were still, the birds stopped singing, even the distant sea ceased its restless motion. And then everything burst into sound and activity again, bodies pounded past Johnson toward the clearing, dust hung in the air, and Shelly was crying.

"Where's my Mommy?" she said. "Where's my Daddy?"

Johnson held her tightly in his arms and tried to comfort her, but there was nothing he could say that would not leave her poorer than she had been a few moments ago.

Then he heard footsteps approaching on the path.

"Hello, Shelly," Ellen said heavily.

"Mommy!" the little girl said, and Johnson let her go to her mother.

After a moment, Ellen said over the child's head, "You knew what was going to happen, didn't you?"

"Only if certain things happened."

"If I had not come here Steve might still be alive," she said, "and if you hadn't been here both Shelly and I might be dead."

"People do what they must—like active chemicals, participating in every reaction. Some persons serve their life purposes by striding purposefully toward their destinations;

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others, by flailing out wildly in all directions."

"What about you?"

"Others slide through life without being noticed and affect events through their presence rather than their actions," Johnson said. "I am—a catalyst. A substance that assists a reaction without participating in it."

"I don't know what you are," Ellen said. "But I've got a lot to thank you for."

"What are you going to do now?"

"I'm going to sit down and think for a long time. Maybe Steve was right. Maybe I was neglecting Shelly."

"Children can be smothered as well as neglected," Johnson said. "They must be loved enough to be let go by people who love themselves enough to do what they must do to be people."

"You think I should go back to my project."

"For Shelly's sake."

"And yours?"

"And everyone's. But that's just a guess."

"You're a strange man, Bill Johnson, and I should ask you questions, but I have the feeling that whatever answers you gave or didn't give, it wouldn't matter. So—let me ask you just one." She hesitated. "Will you come to see me again when all this is over. I—I'd like you to see me as something other than a suspicious, harried mother."

An expression like pain passed across Johnson's face and was gone. "I can't," he said.

"I understand."

"No, you don't," he said. "Just understand—I would like to know you better. But I can't."

And he stood on the hillside, dappled by the light that came through the leaves and was reflected up from the ocean, and he watched them walk down the path toward the road that would take them back to the boat, back to the mainland.

In the distance a frigate bird sailed alone in the sky, circling a spot in the ocean, turning and circling and finding nothing.

The rented room was lit only by the flickering of an old neon sign outside the window. Johnson sat at a wooden table, pressed down a key on the cassette recorder in front of him, and after a moment began to speak.

"Your name is Bill Johnson," he said. "You have just returned to her mother the little girl who will grow up to perfect the thermonuclear power generator, and you don't remember. You may find a small item in the newspaper about it, but you will find no mention of the part you played in recovering the girl.

"For this there are several possible explanations. . . . "

After he had finished, he sat silently for several minutes while the cassette continued to hiss, until he remembered to reach forward and press the lever marked "Stop." ■

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Ecology is an all-or-nothing system. Just like psionics.
Sam Nicholson

a rat of any psize

When I met Mr. Lee Soomb at a jungle port in Sumatra, I had no idea of the later significance of his weird machines to food production and city engineering. I was relief skipper on the *Duwayo*, a supply vessel chartered to an international food corporation that was trying to build a coconut oil refinery in the jungle.

I do not know if the refinery ever got off the ground. Indonesia generally has done a great job of lifting itself by its own bootstraps, but like most developing countries it has primitive areas where civilized rules do not apply and the devil takes the hindmost.

The food corporation had the bad luck to choose one of those wild areas. The building supplies ran into the sand. What was not pilfered from the *Duwayo* was stolen from the building site or ripped bodily from the construction work.

The food corporation's losses were no skin off our nose. The *Duwayo* had been chartered at a fixed monthly fee which should have given

George Schelling

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a profit to the Singapore consortium that owned her. However, the ship also began replacing stores and equipment at a puzzling rate. Her skipper was pulled off at Singapore by the Operations chief, Lin Wu, and I was sent aboard.

I was known to be Lin's hatchet man, and I did not make myself more popular during the short haul up the Malacca Strait. I inspected the officers' quarters and found enough canned food to stock a supermarket, plus items stolen from the paint locker, rope locker, engine room, and bridge.

The *Duwayo* had white officers and Chinese crew. The Chinese were old hands, reliable from the consortium's viewpoint because their gambling and smuggling were financed by their own wages. There was no question of their doing the stealing.

The white officers were another matter. Most of them had drifted east of Suez because of trouble in westerly waters, and the jungle bay of Sumatra presented irresistible temptations. The native girls, like the wily savages they were, came to the ship and enticed the officers home with them, and the village fastened onto them like leeches.

Being disinclined to spend their own cash, if they had any, the officers had begun to scrounge from the ship to satisfy their girl friends. By this time, too, there probably was uglier pressure from male family members who had muscled into the racket.

After we had docked at the jungle base and the cargo was discharged I let the officers go ashore as usual. If they wanted to support a gang of pack rats with their own money, I hoped they had a nice day for it.

One officer remained on board, the second engineer. I had found no loot in his cabin. He was a Midwesterner named Gavan, a round-shouldered string bean with blunt-tipped fingers. He had signed a two-year contract because the money was good, and I knew he was sending almost every cent home.

That afternoon, since we were the only officers on the ship, I invited him to my quarters for a drink and tried to sound him out. A shipboard racket usually has a ringleader. Gavan kept his lip buttoned. I could not decide whether he was afraid of reprisals or really did not know which bastard had egged everybody on to plucking the ship bare.

When our second drink was watering down in the heat, the Indonesian watchman, a seedy-looking Malay, tapped at my opened dayroom door and waved a white business card at me.

Wondering if the visitor was food corporation brass, I took the card and read, *MR. LEE SOOMB, MOUNTAIN COFFEE ESTATES*. Coffee? I handed the card to Gavan and asked, "Do they raise coffee in this overgrown swamp?"

He studied the card. "I believe a British outfit is developing the highlands to the west, captain. The name

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Soomb doesn't ring any bell, though."

I told the watchman to send the guy up. After a moment a slight, white-suited figure hugging a wicker basket stood in the doorway.

Mr. Lee Soomb was light-skinned and sandy-haired like a Dutchman, small-boned like a Malay and had a touch of Chinese ivory.

He set the basket carefully on the deck and bowed at us both. "Whom have I the honor of addressing Captain?"

I did not get out of my chair. For all I knew, he could be a local con man. I said, "I'm Captain Schuster. You have business with the ship?"

"Am in need of technical advice not forthcoming, alas, from construction engineers with own problems. In remote fastness, how to wire an electrical system correctly? After desperate trip to coast, ship is last resort."

I decided he was legit and invited him to sit down. "This is Mr. Gavan, second engineer," I added. "What's the difficulty?"

Mr. Soomb perched humbly on a chair. "In tropical agriculture, difficulty is fertilizer. Food crops quickly drain nutrients, and soils do not have natural renewing action of frosts and snowfall."

Gavan interrupted, "But you have volcanic soil for the coffee, don't you?"

"Yes. Coffee estate is well started. It is not as Estates manager but as private individual that I am seeking advice."

He paused as if he was not sure I would deal with a private individual. When I said nothing, he went on.

"Under Indonesian law I personally can own twenty hectares of dry land—dry as opposed to wet riceland. I have bought this acreage in the valley adjacent to the Estates. I hope to grow the new cereal grains, which need much fertilizer. I have no money for import. Must devise fertilizer locally."

"Out of what?"

"Jungle compost and overabundant bone-and-protein source. Rodents."

I had not thought of rats in that connection, but from our Chinese crews I had heard how Red China processed human bodies. Probably ton for ton both rats and men reduced to the same fertilizer components.

The snag occurred to me. "How can you catch enough rats?"

He dragged the wicker basket towards him and opened it. Inside was the oddest-looking contraption—! Seeing my surprised glance Mr. Soomb hurriedly drew out a coarse, smudged paper and closed the basket. He held the paper out to Gavan.

"Please. Engineer's opinion of better rattrap? Electric current is generated on Estates. Direct current as on ship."

Gavan's face lit up with interest. To me, the diagram looked like a kid's backyard slide, with the ladder stanchions stuck inside a barrel. Mr.

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Soomb explained, moving his finger up the slide, "The rising approach ramp can be anything, of course. At top is an electrocuting grid and conveyor belt depositing dead rats in container."

"You don't need a conveyor belt," said Gavan immediately. "Put a back-slant on your ramp, with an isolated live-plate. The rat climbs the ramp, continues over the bend to the plate, gets the wattage and slides by gravity into the barrel.

"But why a barrel?" he went on. "Use a trash compactor. The compacted blocks can be sliced into the vegetable compost. And why a ramp, if it comes to that?"

Mr. Soomb hesitated. "Universal constant in rodent psychology. Height acts as magnet."

I felt this was true. Like what the mountaineers has said about Everest. They climbed it because it was—no, wait a minute—

Gavan was asking, "And suppose you run out of rats?"

"Impossible. Rats are an absolute infinity."

Gavan grinned. "Like marching the Chinese Army four abreast past any given point?"

"No, no. I should have said, cosmic infinity."

In that split-second I heard—sensed—movement in the alleyway. I yelled "Watchit!", lunged low from my chair and slid out of sight behind the desk.

The air whined, and a knife handle quivered at heart level in the upholstery of the chair I had been using.

Mr. Soomb and Gavan had been too startled to move. But now the slight, white-clad figure charged into the alleyway, angrily yelling a spate of native words.

Gavan sat still, with a tight look that said he knew more than he thought was safe to tell me.

I got to my feet, came to the chair and pulled out the knife. It was double-edged, with a runnel cut down the center of the blade. A real killer.

Mr. Soomb came back, breathless. "Watchman reports assailant has dived overboard into sea. Do you wish the police?"

"Hell no," I said. "We can't tie up the ship in red tape." I added to Gavan, "I should have foreseen that backlash."

I kinda admired the gutsy way Mr. Soomb had run out to counterattack. I put the knife in a desk drawer and asked him, "Would you like to stay aboard tonight, Mr. Soomb? The pilot's cabin is available. Mr. Gavan and bosun Wong can knock together a rattrap in the tweendeck, and we'll see how it works. The ship needs a deratting anyhow."

Color came into Mr. Soomb's ivory cheeks, and his caramel eyes glistened. "Thank you. I will, of course, reimburse the ship for the costs."

I waved this aside. "Dicker with Wong about smuggling a trash compactor next trip."

Gavan protested, "How can Wong

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smuggle anything as big as a trash compactor?"

"Wong could smuggle an elephant into an igloo. Don't ask me how he does it."

Mr. Lee Soomb hoisted his mysterious basket, and Gavan led him below.

I phoned down to the watchman and asked him to come to the office. His story of the man diving into the sea had been pure malarkey. We had heard no splash. A moored, empty ship is a sounding-board magnifying even the plop of a bottle into the water.

Moreover, the knife-throw had come from a blind angle. Only one man would have known where I was sitting.

The watchman slunk into the doorway, with the bold look of a guy who thinks he is getting away with something. I grabbed him by his greasy hair, punched a fist into his belly, threw him to the deck and went over him. The knife-sheath was strapped under a pant-leg.

I let him go, and he sat up. His eyes were not so cocky. I said, "Tell your pals the good times are over."

He crawled to his feet. I took the knife from the desk and motioned him ahead of me, out to the dockside boat deck. I flipped the knife overboard. It fell in a bright flash and stuck in a dock piling.

"Get off the ship and stay off," I ordered him. "If I see you in the dock area, I'll beat you to a pulp."

He scurried to the deck ladder. A few seconds later I saw him run down the accommodation ladder and jerk the knife from the piling.

He was one rat I should have compacted, I guessed. He would be laying for me if I went ashore. Maybe some of the officers also were laying for me. I had no illusions about the spot I was in. Skippers who break up shipboard rackets tend to be lost at sea.

I ordered supper for Mr. Soomb, Gavan and myself to be served in my dayroom. It was not a very coherent meal. I was preoccupied, and the other two were jawing about automatic feed lines and photoelectric cells.

I still could not figure out where the necessary tons of rats would come from. I asked Mr. Soomb what he meant by a cosmic infinity.

He pushed his plate away and began, "As you know, captain, this planet has gone through several distinct experiments in life energy, from the trilobite to the Tyrannosaurus to present-day species. This creative force is resident solely in the cosmos and is not within human manipulation."

He explained further, "When I say present species, I mean that this is the Age of Rats. Within the Age, the rats are infinite because they are, in fact, the current experiment in life energy."

"Just a minute," I interrupted. "This is the Age of Mammals. A rat is only one kind of mammal."

He smiled. "No, no. The rat came

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first, captain. All mammals are only different kinds of rats—some nearer the original strain, some further removed, all sharing the same Rat characteristics. There is an immense fluidity among the species.

"Not as to physical interbreeding, of course," he continued, "but as to the psionic impulses forming mental patterns. Personality interplay ranges over the entire spectrum."

Gavan translated, "He means, that's why people look like their dogs. There's no real difference in mental characteristics and like attracts like."

Mr. Soomb nodded. "The essence of Rat is a common pool shared by all mammals."

I had to admit I had been thinking in terms of human rats, but this blurring of species was too deep for me. I asked how the rattrap was working out.

"Shall we go below and see what we have caught?" asked Mr. Soomb.

Well, the damned trap was as lethal as it could get, and Gavan had posted signs, KEEP AWAY—LIVE WIRE. Basically it was a wooden mock-up of the playground slide, with the back-slant Gavan had suggested and an exposed wire rigged over a piece of metal scrap.

A beer case had been dragged up to represent the compactor. It was already full of electrocuted rats. I looked to see what bait had been so effective. There was no bait. Had height alone drawn the rats?

I noticed Mr. Soomb's wicker basket lying open behind a pile of dunnage. I investigated.

Here was the odd setup I had glimpsed briefly when Mr. Soomb had taken out the diagram. In the middle of a square shallow box was a freestanding sphere of copper wires. Concentrically from this sphere were two circles. The inner was a clear plastic ring over what seemed to be scraps of writing. The outer ring was of double-decker isinglass sandwiches. That was all.

I demanded, "What's the big idea? What's that a model of?"

Mr. Soomb explained, "It is not a model. It is a working psionic machine."

That word psionic again. I growled, "The Russian telekinesis rip-off?"

"Psionic waves are genuine waves, captain. Obviously the brain's psionic energy must be emitted on measurable wavelengths, like electromagnetic energy but beyond it.

"Try to understand my problem," he went on. "Rats, like other animals, have their hunting areas. To catch them in the necessary quantity for fertilizer, I needed to control them over long distances, miles beyond the limits of their natural senses. By what means could I broadcast to them and make them assemble at a collection point? On what meter band would they receive me? Again obviously, the mind-to-mind, the psionic."

He smiled, "Fortunately psionic

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waves can be harnessed more simply than electromagnetic ones."

I indicated the transmitter. "How does it work?"

"First, the brain is a total energy field, not a mere network of here-to-there relays." He pointed to the wire sphere. "My concentration transfers my psionic field to this sphere, which selectively transforms field-level energy to wave-level. Originally I built only the sphere and the outer circle of identity contacts—rat blood and brain tissue layered in mica cubes.

"However, I could not be continually present to concentrate on the sphere. I needed a kind of storage battery for my field energy, to transfer my concentration to the machine. I transcribed my mental pictures into written words, defining the essence of Rat, as if the words were a printed circuit."

I asked, naturally, what his definition was. He said, "The cunning and slyness; the omnivorous, ruthless feeding habits; the gnawing in secret dark places; the boldness of the pack and treacherous cowardice of the lone individual."

He turned again to his psionic machine and continued, "I glued the word-tracers under a plastic ring between the energy sphere and the contact cubes. To stop the machine, I need only lift off the ring."

While we talked, a dirty gray rat drifted towards us, its tail sculpturing the dust-layer on the deck. The rat was soaking wet. Apparently it had swum to the anchor chain and climbed aboard through the hawse pipe. We had rat guards, of course, on the mooring lines.

The rat nosed aimlessly to the psionic sender, then fixed its beady eyes on the ramp. It scurried up—went over the top—stiffened and tumbled into the beer case.

I had seen it, so I had to believe it. I remarked, "That's a dangerous sending pattern. I don't know how you measure psionic waves, but a whazzahertz one way or another and you might get human beings climbing that ramp."

"No, no, captain. The transmitter is fine-tuned to the *rattus rattus* thought-structure." He paused a moment. "Of course, an incidental side-effect could be a transformation of total energy by another receiving animal."

I looked to Gavan. He translated, "Well, captain, a rat and a weasel are pretty much alike and have similar thoughts and behavior. If a rat signal took over a weasel brain, the weasel might simply turn into a rat."

"Why?"

COMING SOON

George R. R. Martin's first novel opens our April issue. It's titled *After the Festival*. Since the Neolithic Era, human tribes have gathered together at special times of the year in traditional celebrations. In Martin's novel, each of the major characters brings a different cultural background to a festival planet, to produce a many-tiered conflict. The science fact article will be "Legal Rights for Extraterrestrials." Plus more stories and features.

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"The brain is the control center. We are what we think."

"I think you guys are bananas."

I left them discussing how to shield the live-plate, and I went to my quarters. I was concerned about that wet rat. Apparently, in deratting the ship, the psionic machine would derat the entire coast.

I hit the sack with the personnel question still unanswered. Lin Wu wanted to salvage what officers he could. Men who went to pieces in a jungle could still be usable on trade routes where the environment provided the discipline they lacked.

Between the personnel uncertainty and the muggy jungle heat, I was restless. About midnight I got out of the bunk, pulled on my pants, scuffed my feet into sandals and went out on deck.

Because of the pilfering, the *Duwayo* was fully lit with deck lights, spotlights, cargo lights. I went up to the bridge. Gavan's string-bean figure was draped over the dodger. He turned and frowned absently as I stepped up to him.

"I was worried, captain," he said.

"About what?"

"That psionic machine. It may be fine-tuned, as Soomb says, but it is tuned to the mental, not physical, essence of Rat. It could attract and transform weasels—or monkeys—or men."

"Oh, sure. Now tell me how it could turn a two-hundred-pound man into a two-pound rat."

"We know psionic waves have the speed and penetration of cosmic rays, but all measurement has been along that one dimension—an outgoing, positive dimension. No one has experimented with an inward, inself-directed, negative thrust. Psionic waves can do—and undo."

He hesitated. "Have you ever thought about the function of the neutron in the atomic nucleus?"

"I don't lose any sleep over it, no."

"Because the neutron has no electric charge, should we assume it has no charge whatsoever? What if it has a positive psionic charge?"

"For one thing, the hydrogen atom would be out in left field psionically."

"Maybe not. We don't know the possible psionic functions of the neutron. Hydrogen could be a stabilizer in that instant when the brain's negative thrust was pulled to psionic-positive neutrons—a thrust that could infiltrate and short out the non-hydrogen-atoms' electric paths, dissipating all subatomic particles.

"From which particles," he said slowly, "a psionic signal could form a two-pound rat."

"And the remaining hundred ninety-eight pounds of man?"

"Well, that would recombine its molecules around the hydrogen base and become water, mostly, with a few mineral salts."

He brooded. "I ought to warn Soomb not to use a live wire on the rattrap. If water hit it, he could blow every fuse on the Estates."

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The ship's lights went dead. We were standing in blackness.

With Gavan at my heels I barged off the bridge, into my quarters, and fumbled a couple flashlights from the desk. We beat it down to the tweendeck.

We noticed the air, first. The tangy ozone smell of a lightning flash. The deck was wet. The steel of the hull and the overhead beams dripped as if from a heavy dew. The insulation around the live-wire was scorched away.

Gavan unplugged the cable to the trap. I saw him pause, play his flashlight on an object, lean over and pick it up. It was the watchman's knife.

"My God!" he cried.

He rushed to the mound of rats overflowing the beer case. "They are here, captain!" he yelled hysterically. "They sneaked on board—probably to kill you—and the machine got them!"

I thought he had found electrocuted human bodies. I went over to him. He was directing the flashlight onto the rats.

"Don't you recognize him, captain?" he babbled. "The chief mate—that rat over there, with the crooked teeth and scarred nose. Oh, he was a real *rattus rattus*, all right! The Old Man was scared to death of him. We all were. I never would have dared talk about him while he was alive, but seeing him dead—him and the watchman—"

I liked Gavan too much to belt him one. I took a deep breath and tried reasoning. I said, "Clothes."

"What, captain?"

"Those guys weren't running around nude, were they? If the psionic signal transformed them into rats, what happened to their clothes?"

For a moment a kind of sane relief brightened his face. Then it clouded over and he said, "Clothing is only an extension of personality. In a total energy transformation it would be incorporated into hide and hair."

He looked at the knife he was still holding and murmured, "Maybe some objects have their own psionic life."

"And maybe some men overwork on two-year contracts," I said gruffly. "Gimme that knife. Go fix the power blackout—and forget this whole conversation."

He pulled himself together, handed over the knife and left.

I turned my flashlight on the rats. To me, they were only rats. Of course, there was the mammalian link. I could understand how a vivid imagination could turn rodents into pseudohumans. Like Mickey Mouse. Or that crooked-toothed mate over there, his spikey tail lying across the seedy-looking—

Wait a minute—I was off the rails again.

I walked over the wet deck to the psionic transmitter and lifted off the plastic ring. It tingled a moment before it went cold. Whatever the machine was summoning, I wanted no more of it.

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The officers came back to the ship the next day, their spree having turned sour. The chief mate never came aboard. The watchman was never seen again, either.

I had to report the mate's non-appearance to the local authorities, and they held the ship a week while they investigated. Gavan was like a cat on hot bricks, half convinced he had participated in psionic murder. He would have spilled the whole crazy story if Mr. Soomb and I, for different reasons, had not stifled him.

Although the ship was losing no money by the delay, the time passed heavily. Mr. Soomb, after an earnest conference with bosun Wong, went ashore with his psionic machine and a reluctantly-given wiring diagram from Gavan for what Soomb and Wong were now calling a deratting station.

In his wicker basket Mr. Soomb also had the watchman's knife, which he begged of me. A kinda morbid souvenir, I thought.

Unsatisfactory though it was, that seemed to close the story of Mr. Soomb. When the *Duwayo* finally returned to Singapore and I had delivered my report to Lin Wu, I was transferred to another ship needing a troubleshooter, and I never saw the *Duwayo* again.

For three months Lin kept me on the Borneo-to-Japan oil route. Then I got a letter from my former employers in New York. The issue upon which they had fired me—my attempt to dismiss a drunken officer with Company pull—had turned out as I had predicted. The guy had gone berserk, and the Company had a mess of damage suits on their hands.

In apology—though they did not express it that way—they were offering to reinstate me in my former command. I figured I ought to accept, although I liked my work with the consortium.

Lin Wu understood my reasons for quitting, and we parted good friends. In fact, I owed to Lin my knowledge of what happened further to Mr. Lee Soomb, his psionic machine and his deratting station.

About a year after the episode on the *Duwayo* I got a letter from Lin enclosing a clipping from the Asian edition of a news magazine. The headline was SEA FARMING. I began to read.

"The engineering research firm of Soomb & Wong—"

Soomb and Wong? I laughed at the way bosun Wong had parlayed a smuggled trash compactor into a partnership. I read on:

"—are supplying the rat-based vitamin-enriched food meal for a projected fish hatchery now under construction north of Timor. Cheaper than netted plankton, the rat meal has proved satisfactory for hatchling growth."

The article reviewed the "fertilizer processing which Soomb & Wong have done on the larger Indonesian plantations" and came to a further

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most interesting point:

"A by-product of the extensive deratting necessary to the fertilizer is a drastically-reduced crime rate. Environmentalists interpret this as proof that a clean rat-free community induces healthier mores."

I wondered how Gavan would interpret the reduced crime rate, wherever he was. He would say that Rat-essence thieves were not healthier—just reconstituted into a couple pounds of rat meal and varying amounts of water vapor. The *Duwayo*'s tweendeck had been sopping wet for no good reason, that was for sure.

Although Soomb & Wong were increasingly in the news, I did not give them serious thought until an incident several months later.

The ship was alongside a New York pier. The watch said a guy from the Sanitation Department wanted to talk to me. I figured a messman had dumped a pail of garbage overboard and I would have to wangle us out of a fine.

But the Sanitation guy turned out to be a wheel in the planning department. I could not understand what the hell he wanted with me. However, I shook his hand and offered him a drink, and after a while we got down to cases.

"Quite by chance, captain," he began, "in a social conversation with one of your Company executives, I found out that you were working for a Singapore consortium about two years ago."

I admitted the fact. He asked, "Did you ever meet up with the firm of Soomb & Wong?"

I hesitated, and he went on, "They have approached us with what seems on the surface to be a workable recycling project combining deratting stations and the collection of vegetable discards."

What he meant, I supposed, was that Soomb wanted to clean out the market district and restaurant alleys for processing materials. I still did not comment, and the guy continued, "We like the proposition, and we like what we hear of the results—a cleaner city, less crime. But we're trying to corroborate the facts. We need a report from nearer home. The Orient is—well, the Orient."

I saw his point. I said, "I wouldn't believe any statistics from that area, myself. But all I can tell you is that Soomb and Wong set up their first deratting station aboard my ship, the *Duwayo*."

"Was it efficient?"

I wondered if I ought to tell him about the psionic-positive neutrons and the drenched tweendeck. New York City kept pretty accurate vital statistics. If the deratting stations really began disposing of every sly, thieving, ruthless, secretely-gnawing Rat in the five boroughs—

At last I said, "Efficient, yes. The machine did not leave a Rat of any psize."

The Sanitation guy seemed satisfied, so I let the matter rest. As far as I know, it is still resting. ■

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the golden years

An intelligent society makes use of ***all*** *its natural resourses.*

Christopher Anvil

The three tough youthful figures rose intently from the thick shrubbery, to watch the elderly man stroll through the sunlit park toward the lake. Briefly they studied his neatly pressed expensive blue suit, his stylish black cane, and his air of peaceful assurance. Then the tallest of the three jerked his head, and they were out from behind the brush.

They crossed the grass swiftly, almost silently.

Eric Morgan felt the warmth of the sun through his suit, breathed the comparative freshness of the air, enjoyed the park's varied shades of green and brown, and light and shadow. Ahead, still out of sight, was the lake. Today the lake should be calm, reflecting the trees along the shore, though on a more breezy day the waves would sparkle, and–

His thoughts were interrupted by a sharp buzz–a sound that seemed right in his head.

There was an instant before Morgan's nearly automatic reaction could operate. In that instant, his attention was drawn to the chain of associations roused by the buzz, and, for a moment, he seemed to be back there at the beginning, two years ago, looking at the small white card, like a business card, that Ben Stevenson had handed him:

Benjamin L. Stevenson
Associate
The Prudent Assurance Co.

Morgan blinked at the card, then looked at Stevenson.

"What's this, Ben? I thought you'd retired, too."

Stevenson grinned.

"I *have* retired."

There was something carefree about Stevenson that puzzled Morgan.

"Retired from W-S," said Morgan, referring to Stevenson's old company, "and working for this Prudent Assurance outfit?"

Stevenson continued to smile.

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"Not working *for* them. Working *with* them."

Morgan, faintly irritated, glanced back at the card, and on impulse turned it over. The reverse side bore an address and phone number in Stevenson's handwriting. Morgan started to hand it back, but Stevenson stopped him.

"I wrote that down for you. Listen, Eric, how does retirement hit *you*."

"You want a frank answer?"

"That's why I asked."

"I figure everybody dies sometime. I also figure everybody *retires* sometime. Retirement is like death and taxes. And old age. You're stuck with it. That's how I feel about retirement."

Stevenson nodded. "My own feelings exactly."

"But, what good—"

"That's why I gave *you* the card. I have to pass that card to someone. It's a condition of association with Prudent."

"Wait a minute. 'Association' means employment? Or *what*?"

"Go to that address and they'll tell you."

"Generous of them." Morgan's eyes narrowed. "What's their line of business?"

"Assurance company."

"They're insurers?"

"Not in the usual sense. If you have an automobile accident insurance policy, then you're insured against auto accidents, right?"

Morgan frowned. "Go on."

"But," said Stevenson, "you can wrap the car around a light pole any time. All your insurance means is—you or your heirs will receive a certain amount of reimbursement—a cash payment, or protection against being forced to pay damages—in case of an auto accident. Prudent is different."

"How?"

"Its policy aims to protect you against *the actual situation specified*."

There was a silence as Morgan stared at Stevenson.

Stevenson smiled, and raised his hand.

"*If you're interested, they'll tell* you about it. I have to go now. See you."

Morgan blankly raised his hand in good-bye, then, during his solitary lunch, he glanced again at the card, looked up at the phone booth in the back of the restaurant, then glanced at his watch. Like a blow at the back of the head, it came to him again that he had *nothing to do* this afternoon. A succession of empty days stretched out before him like vacant subway platforms in a deserted city. He got up, paid his check, and went outside, calculating the shortest route to the Prudent office.

Twenty-five minutes later, he stood before a tall narrow marble-faced building, and read its discreet bronze plaque:

THE
PRUDENT
ASSURANCE
COMPANY

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He crossed the marble pavement, pushed open one of the short row of polished glass doors, and went in. A line in the building directory caught his attention:

Prudent Assurance, Information 401

Morgan stepped into the nearest elevator, and punched the button for the fourth floor. 401 proved to be a large room divided into cubicles. A pretty girl flashed a smile at him, and directed him to a Mr. Benvenuto.

Morgan, unable to fit the arrangement into his experience, shook hands with Benvenuto, and held out Stevenson's card.

"A business acquaintance of mine recommended Prudent. He said you don't *reimburse*—say—accident victims who have one of your policies. You provide *against the accident's happening in the first place.*"

Benvenuto studied the card briefly, and smiled.

"Did Mr. Stevenson draw a distinction between the approach of an insurer and *our* approach, so far as policies are concerned?"

"He drew the distinction I've just mentioned."

Benvenuto returned the card, and sat back.

"The usual insurance company policy is based on probabilities. *Our* policies are based on probabilities. But there is a difference. We attempt to *alter the probabilities* in our policyholders' favor. What do you consider to be the usual basis of an insurance company's operations?"

Morgan, frowning, settled back.

"The idea is that there are *bound* to be a certain number of accidents. Other things being equal, the cost of these accidents will naturally fall on those who *have* the accidents. These costs will often be so heavy as to ruin people financially. But—by spreading the costs over a great number of individuals, each individual has to bear only a small share of the total expense, whether he has an accident or not. And he *can* bear that share of the expense. The underlying principle insurance companies are based on is—'Many hands make light labor.'"

Benvenuto nodded. "The drawback is that many hands make light labor *only* if the burden stays below a certain limit."

Morgan thought a moment, nodded, and spoke dryly.

"Yes, the idea doesn't work too well if the many hands are carrying a stock tank—open at the top and they have to pass under a waterfall while they're carrying it."

"No. And that, in principle, is almost exactly what *has* happened. Someone hit lightly by a car used to be embarrassed. How clumsy to get in the way! A jury asked to award a verdict against an honest man who had accidentally bumped someone else was likely to award just enough to cover the actual real visible damage. But the existence of the insurance company has changed all that. Now the jury may well decide

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to wring a big award from the insurance company. And a person only lightly damaged, knowing the jury may so decide, sees the chance to get a big award, and acts accordingly. The same general principle holds to one degree or another in hospital insurance, fire insurance, malpractice insurance, and what-have-you. The many hands pick up the open-topped water tank, and, lo! the burden is light! Then they pass under the waterfall of public attitudes and stagger out on the other side scarcely able to bear the burden. Hospital *insurance* now costs, just for the premiums, what a considerable stay in the hospital used to cost. A year's car insurance can cost more now than the car itself once cost."

Morgan nodded. "But what can you do about it?"

"There are other ways to make light labor."

"Such as?"

"Stronger individuals, a lighter burden, a better handle on the load, some way to permit those who want to bear part of the burden to *not* be forced to let go. Different applications of the same underlying principle, which is *to lower the ratio of load to strength applied.*"

Morgan looked at Benvenuto intently. "The principle is clear enough. But how do you *apply* it!"

Benvenuto smiled. "Our approach is the by-product of an unexpected discovery. I'm sure you're familiar with some variation of the parlor game played by one person studying cards and 'sending' a mental image of what he sees, while another person 'receives'—or tries to receive—what is sent?"

"Yes."

"And are you also aware that TV sets can be built at home, as part of various correspondence-school courses of instruction?"

"Yes—I've gotten a few ads for them in the mail—'Make Big Money In TV Repair.' What's the connection?"

Benvenuto leaned forward.

"Suppose, Mr. Morgan, that you were constructing one of those TV sets—incidentally one with a digital clock display in the corner of the screen—and in the same room someone else was 'sending' the mental image of a card, and suddenly as you worked on the TV *you saw the card.*"

Morgan blinked.

"If you could repeat it—"

"Yes."

"Then you have what? Some form of telepathic signal amplifier?"

Benvenuto nodded. "Close enough."

Morgan frowned. "But—this seems a long way from an *insurance* policy."

"You have, perhaps, the suspicion of having wandered into a nest of crackpots."

"Not yet. Your come-on isn't slanted to take advantage of gullibility. But I still don't see the connection."

"You grant the possibility?"

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"Why not? After men have walked around on the Moon, why should I claim *this* is impossible? Grant it, and say you *have* a form of telepathic signal amplifier. Still—aside from settling the argument whether there is such a thing as telepathy, where are you? Is this amplifier small, compact, easily used?"

"In its enormously improved and precisely accurate form, it is large, bulky, quite heavy, complex, and requires a moderate amount of electrical power to use it effectively."

"In short, it's a white elephant?"

Benvenuto smiled. "It certainly won't enable us to compete with the Bell System or Western Union."

"Then—"

"It is, however, our principal tool in backing up *assurance* policies."

Morgan, frowning, sat back and considered Benvenuto. "You're giving me a good deal of information. How do you know you can trust me with it?"

"In the first place, who would believe you? In the second place, how can you be sure I've told you the actual undisguised truth? In the third place, I *know* how sick you are of retirement. I also know that you were retired because of an arbitrary company rule having nothing to do with any actual inability. You are perfectly able to work, yet you have nothing to do. A succession of meaningless days stretches out before you like empty subway platforms. You—"

"Now you're repeating my own mental images!"

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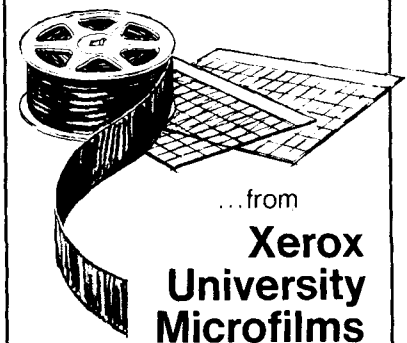

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"You aren't likely to use what I'm telling you against *us*, because we represent a way *out of retirement* and back to the top."

Morgan was unaware that, briefly, his eyes blazed. He sat back, and spoke carefully.

"What is *Prudent's* retirement policy?"

"We retire employees and deactivate associations only because of what we believe to be a lack of capability. The recovery of capability means rehiring or renewed association."

"All right, I'm interested. What's your offer?"

Benvenuto's eyes glinted. He leaned forward.

"Prepare yourself, Mr. Morgan. I am a fanatic on this subject. Western civilization is sinking—and it is sinking largely because of a lack of *insight and self-discipline*. We have the physical means necessary to pull ourselves out of this ruck. We lack only the insight and the *will*. With such means, plus the drive to achieve, where is the limit? Very well. I am an enterpriser. And I possess a telepathic signal amplifier. Is it wrong for me to receive a financial reward for reversing the decline of the West? Not if I do a good job. Here, Mr. Morgan, is a sample of one type of Prudent's assurance policies."

Morgan took the crisp slip of paper, glanced over the policyholder's name and the policy number, and read:

"The aforenamed policyholder is hereby *guaranteed* against failure in his *effort to secure the degree of M.S. in physics*."

Morgan turned over the crisp pale-green paper with its interwoven design of eagles and starbursts. The back was blank.

Benvenuto leaned forward.

"Here is another."

Morgan read:

"The aforenamed policyholder is hereby *guaranteed* against loss of nerve if detected by the government involved, while engaged in espionage for the purpose of *locating and if possible freeing prisoners of war still held contrary to treaty obligations.*"

Morgan stared at the name on this second policy.

"Is this real?"

"Absolutely."

"But—"

Benvenuto nodded. "There is no credential so convincing in some places as treason in another place. It follows that to be accepted *there*, one should appear a traitor here . . . Here is another of our policies."

Morgan didn't take it. "You're showing me too much. I don't have any need to know this."

"There is no possible harm in your seeing this. This is a somewhat different type of policy."

Morgan read:

"The aforenamed policyholder is hereby *assured* that he will effectively *defend himself if attacked by a street gang while carrying out his duties in or about the above-named address.*"

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"How, said Morgan, "could you possibly assure *that*?"

"By the same means," said Benvenuto, "that we can prevent a failure of nerve under torture, or any weakening of determination in the pursuit of any reasonable goal. We gather to ourselves *every unoccupied but capable man and woman* we can lay our hands on, and we use our receiving and transmitting equipment to stay in close touch with our policyholders. Our associates' skills and nerve are constantly on call, and they reach the policyholder by a route that no merely human opponent has yet shown any means to block."

Morgan stared. For an instant the possibilities dazzled him. Then abruptly he came back to earth.

"Wait, now—a fight against a *street gang*—"

"We have," said Benvenuto, "some combat veterans of unusual skill among our retirees. Are you aware that some organizations forcibly retire their men at *fifty*? Yet there are those in their fifties who can demolish the average thug of whatever age, and never breathe hard in the process."

"Some of this must be going over my head. How does *their* skill help your *policyholder*?"

"Why, Mr. Morgan," said Benvenuto, "*everyone* has at least a slight telepathic ability—and when that telepathic ability is sufficiently amplified by the apparatus that takes up most of this building, what do you suppose might happen then?"

The buzz was still in Eric Morgan's head as he turned, to see the three grinning tightly, coming for him. He had a brief sharp memory of the gym in the Prudent building, of the white-jacketed doctors and instructors, and of the exercise period imposed daily on every Prudent staff member, employee, or associate, and then that memory vanished as his hand automatically swung the cane up, and his other hand casually gripped the cane, near its lower end.

The voice, offhand and familiar, seemed to speak inside his head:

"Jim here, Eric. Hyperventilate."

Eric Morgan breathed deeply.

The voice spoke again, louder and closer, deeply content:

"Just relax. It's all mine now!"

Morgan suddenly felt a transformation—like a sudden change in body tone. For a glaring instant, he was a tiger, a killing machine, trained for one purpose.

The cane snapped upward, the edge striking under the nearest chin, erasing the grin, then it came down again, partially deflected by the upflung arm of the second assailant, and Morgan could feel the tight grin on his own face as the tip of the cane scraped down across the partly exposed flesh, and then he turned to ram the end of the cane into the third attacker's midsection.

Inside his head, the same voice murmured, *"Okay, Ito, it's your turn."*

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"*Ah, so,*" came the pleasant reply.

Eric Morgan, suddenly gasping for breath, could see in one swift glance the look of stunned shock on his attackers' faces. The first one to have reached him was in the process of being thrown back by a brutal blow under the chin. His fellow thug was bent nearly double by the vicious jab in the midsection. It was number three who now represented danger. His face blank with shock, he nevertheless had a tight grip on Eric's sleeve, just at the elbow.

Eric Morgan was conscious of a faint hiss, of the letting go of the cane, and then his arm swung up and back and down, and, as he felt his assailant's grip tighten, he brought his forearm up, pressing up against the caught elbow, and his assailant sucked in his breath and went over backwards.

Breathing deeply, Morgan studied the three dazed figures on the ground. The third, the least injured, was the first to try to rise. Suddenly there was the glint of a knife.

Inside Morgan's head, there was an indrawn hiss.

Morgan turned partly sideways.

His assailant yelled and lunged.

Morgan's right heel smashed against his opponent's knee. The knife whirled through the air. Morgan picked up the cane.

The voice spoke politely in Morgan's head:

"*Ricardo?*"

"*Thank you, Ito . . . H'm . . . Interesting . . .* "

Morgan's assailant screamed as the cane flashed out, striking to the groin, the chin, the abdomen, the neck, the side of the head—to display in quick succession the vulnerable points of a man.

On the ground, the second attacker rolled over to partly rise, looked with dazed eyes at Morgan, then sunk back down again. The first assailant hadn't moved since he'd hit the ground.

Morgan, breathing deeply, walked toward the lake.

In the *Times-News* building, a man in a striped pink shirt, sporting a handlebar moustache, shook his head glumly and spoke into the phone.

"It isn't *news* . . . I know . . . 'Elderly Woman Breaks Mugger's Arm'—that would have been great stuff a few years ago. But it's going on all over, now . . . No, no, . . . Would *you* buy the paper because of that headline? . . . See? . . . How would *I* know what's behind it? But it isn't *news* . . . Okay, thanks, anyway . . . "

At the police station, a bored patrolman jerked his thumb toward the door.

"Sarge, there's another three cases out here for the bandage man. They claim an old guy with a cane went for them in the park."

"What's the matter? Couldn't they run fast enough to get away?"

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"The story is they were just running up the walk *past* him, and suddenly without warning he went berserk. You know how these misunderstandings will happen."

"H'm. You know the latest crime statistics show a *drop*? We got help from *somewhere*."

Popov mopped his forehead and sank into the soft leather chair.

"One more day like this, and I defect to Albania!"

Andrei Sakharov stolidly emptied the last of the bottle into the shot glass, and loosened his collar. He glanced at Popov and raised his eyebrows.

"What now?"

Popov banged his fist on the table.

"This bargaining is supposed to wear *them* down! I am dealing with one man only—and yet I have the impression I am contending with relays of them!"

Premier Alexis de Toqueville blinked in surprise, took a second look at the rough-hewn, reputedly uncultured Ambassador Griscom, and ran the ambassador's beautifully spoken phrases over in his mind.

"But," said the premier, in his own tongue, "you—euh—you speak French?"

Ambassador Griscom beamed, and innocently spread his hands.

"Et pourquoi pas?"

The premier glanced at his aide, Jacques Belfort. Belfort was already mentally groping through his dossier on Griscom, Arthur P., retired, former president the Griscom Bolt and Spring Co., born Springville, Iowa, educated the Springville Public School System, summoned from retirement by President Curtis, who had himself come out of retirement to upset three front runners of formidable reputation—all of them destroyed in those famous face-to-face debates.

Where, Belfort demanded of himself, *had Griscom picked up that flawless freedom from accent*?

Burton Rainey could feel the discouragement build up as he thought of anatomy, physiology, dissection, internship—the whole combined into one long grind stretching out into the distant future. How he wanted the *goal!* But—the process of reaching the goal—*that* was another thing! Would he be able to persist? Would he fold up under the pressure? *Could* he—?

Almost guiltily, he slid the little pale-green paper from his pocket, and partially unfolded it:

"The aforenamed policyholder is hereby *guaranteed* . . . "

Ahh, that was reassuring! And it had worked so far. But was it real? Was it *really* real? In the long run, could it—?

The familiar growl sounded in his ear. But possibly he imagined it. Perhaps it was only a sublimated materialization of his desire. Possibly, by a process of autohypnosis, he

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himself could succeed—

"Enough of that," growled the mental voice. *"Let's hear those nerves again."*

"M'm," thought Rainey, "olfactory, optic, oculomotor, trochlear, trigeminal, abducent, facial, acoustic, glossopharyngeal, vagus, ah . . . accessory, hypoglossal."

"Again. You hesitated."

"Olfactory, optic, oculomotor, trochlear, trigeminal, abducent, facial, acoustic, glossopharyngeal, vagus, accessory, hypoglossal."

"That's better. Keep at it."

In the big building, its numerous rooms filled with capable people unobtrusively—*undetectably*—helping other able people elsewhere, Eric Morgan settled into the booth in the lunchroom, and gave his order. The waitress wrote rapidly and hurried off.

On the other side of the table, Benvenuto smiled and settled back.

"What do you think of the assurance business?"

"Well—for a strictly impartial judgment, the dollar is rising against the Swiss franc. That's good."

"But you have reservations?"

"When I hear," said Morgan, "that the dollar is rising against hospital insurance premiums, dentists' bills, and a bag of groceries, *then* I'll think we have a grip on the thing."

"M'm. Everything takes time. But we have the right principle. You see, it is all embodied in those few short words you mentioned: 'Many hands make light labor.' But the youth is no longer expected to labor—he is too young. And the adult is forcibly retired. He is too old. And as the age of leaving school is raised, the retirement age is further lowered, so that between the increased burden and the decreased hands, the weight to be borne gets heavier, not lighter.

"And this," continued Benvenuto, "results from *not* following perfectly simple general principles. Unknown to itself, our civilization has been throwing away a large part of its own assets—the energy of its most unwearied people, and the insight of its most experienced people. We can—as an assurance company—strengthen the individual hands involved by reinforcing the individual's determination, lighten the weight of the burden by giving pause to our opponents and encouragement to our friends, and indirectly increase the number of hands that are permitted *to* bear the burden."

Eric Morgan smiled. "By enabling people to *un*retire?"

"If it is a waste to throw away an aluminum can with perfectly good metal in it, what sort of a waste is it to throw away the tempered will and insight of a lifetime's experience? No, if employers can be so foolish as that, *we* are not. We—"

The two men sat back as the waitress brought the order. As she left, Morgan smiled.

"They save metal, but *we*—"

Benvenuto nodded, and beamed.

"*We* save ability." ■

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the shape of plowshares

Just what is it that's the root (raut?) of all evil?

C. L. Grant

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The parade had ended by midafternoon. Derusted tanks, refurbished troop carriers, pathetically gleaming canopied jeeps all vanished inland toward the isolated storage depot thirty-seven kilometers from the city. Brooding cloud-capped mountains waited for them. A faintly-red plume of fine dust smoked behind them, but no one bothered to follow; the streets had emptied quickly as the populace fled from the tropic heat, seeking comfort in the stale breath of omnipresent air conditioners. There was no doubt that the animated display of antiquated might had been nostalgically impressive, but most everyone knew that the show had been a historical sham—after all, the knowledgeable ones muttered in bar after sumptuous bar, the last time a shot had been fired in pacific Balboa was when a UNII liaison gunned down a groping Uruguayan merchant for attempting to violate her neutrality.

"I have heard that dreadful story," General Titus Jenkins said, "and it is a baldfaced, universal lie no doubt started by some disgruntled fisherman."

He shuddered, snapped his frail fingers and held out a hand for another glass of bourbon. He was seated at a small round table on the beachside terrace of the Las Rejas Paradise, the tallest and least ostentatious of twenty-two hotel complexes spiking the narrow beach that bordered the Pacific Ocean. His companions numbered five—florid, tanned, or blanched in order of their drinking habits, time in country, and reaction to the Mayan-inspired spiced shrimp and rice they had just finished. And none of them dared to contradict his pronouncement. Retired though the general was, his record commanded instant respect even from those who had long since given up trying to assassinate him.

"But if I dare tell you the real story, gentlemen," he continued, a forefinger laid in characteristic caution alongside his fleshy nose, "you must swear never to repeat it to anyone, anywhere, anytime. The Twin Canal and Repatriation Act, you know. It still has five years before the lid comes off. And by then I should hope to be dead. The twenty-second century holds no dreams for me."

"But if that's the case, sir, aren't you putting yourself in questionable jeopardy?" The questioner was a major of indeterminate service and untested heroism. He had never been to the Moon. He was young for his rank. And the general thought him extraordinarily scrawny.

"Not at all, Simmons. I trust your discretion."

Colonel Feirday nodded. "You can trust all of us, General. I hope you know that." He sniffed, sneezed, placed his empty glass on the low brick wall overlooking the sand. Then he pointed dramatically. "It was right out there, wasn't it?" His gesture indicated the horizon, the

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puffed clouds, and the fourteen-foot concrete memorial slab currently submerged under the tide.

"So it was, so it was," the general said, his eyes misted in mixed reminiscence. "It was rather difficult, the first two or three times here, as you know. When the Canal Treaty ran out, they refused to renew, even cut their rates so the Nicaragua Canal had to offer midweek specials. Diplomacy, of course, was only just talk. Finally we bombed, they snuck, we sent in troops and bombed, they snuck, we enclaved and bombed, they bombed. Then that blasted quake up north really did us dirt. Still haven't cleared the bloody N'Canal, as you know. Stupid volcano keeps melting the dozers."

"Damned Papa Chino," Feirday muttered, sniffing.

"Ah yes, the infamous Chino," the general said. "Damned smart, though, for a Socialist Communist. If he had died the first time, it might have been a different story altogether."

Major Simmons nodded sagely albeit guiltily; it was his grandfather, they all knew, who had had the task of assassinating the Panamanian leader through various subtle biological inoculations. That the major's grandfather had failed was due less to his ineptitude than to the less than failsafe parachute he was wearing on the mission.

The general, being a general, sensed his discomfort and placed a conciliatory arm on the younger man's shoulder, looking to the others as he said, "But it was not meant to be, don't you know. Not meant to be. And think of it, gentlemen, if the major's ancestor here had accomplished his task, we might never have discovered the efficacy of the ultimate weapon."

A general round of nods this time, another round of drinks.

"So the old bastard lived to be 106, moving his sneaky troops around in those damned mountains . . . and here we are sitting on our asses watching the sea and . . . never mind!" He waved away the unspoken words impatiently. "You didn't come all this way just to listen to my philosophic prattling, did you? You came to hear from the horse's mouth. You want to know how it was done."

A waiter hovered, cleared the table, stood discretely behind the general's chair. An onshore breeze pushed at the low waves, ruffled the general's thin-line moustache, followed the sun bobbing on the western horizon.

"Well, it was like this, gentlemen. There were five of us in that outfit. We had trained day and night for nearly a year after the last offensive. Chino's SocComs had swept all the elections, ran a few obligatory reprisals for the Sunday supplements and borrowed something on the order of ninety-five millions from the French to tidy up the coast. Facade, of course, because the people who

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couldn't find employment in the hotels and resort towns were fresh out of luck. Banana crops and rubber weren't hitting like they used to, and straw hats were declared a capitalistic outlaw. The Australians sneak in from the other side of the ocean and before you know it there were ski slopes and rabbit farms and a few ecological tank farms that lifted the Isthmus' GNP to an all-time high.

"Bad news, as my grandnephew would say. The good old USA was being frozen out of the biggest economic heist in the history of the known world. Undermined right in our own cellar, so to speak. Prestige dropping, embassy balls canceled, the whole country falling into a fit of morbid depression. Have you ever seen a man from United Fruit cry? God!

"And there I was, me and my men, hauling ass through the obstacle courses and training classes and going blind watching films of the nation here slipping further and further away from the good old capitalist bind. A dreadful thing to watch, believe me."

"I can imagine," the major said.

"Don't interrupt," the colonel said as he threw a purse of coppers to the beggars who had begun their semiannual Mardi Gras on the beach.

"We were brought down in a submarine the likes of which hasn't been seen since the high point of the Third War. We were nervous, I can tell you. Old Craig Monfort, he must have heaved his lunch a thousand times after we had left safe harbor at the port of Acapulco. And Billy Donnelly! God Almighty, he wouldn't stop talking. Tension, you see. It drove us up the damned bulkheads. I can tell you.

"At any rate, we surfaced three hundred meters from this very spot. Just gone midnight it was, and we were all in black. Our packs were strapped to our backs, and we were weighted down with all manner of top secret garbage. A hell of a time getting into those damned little rubber boats, believe me. You'd think a country that could put an ape on . . . oh well. Poor Craig nearly drowned a hundred times before he hit the beach."

"The beach," the colonel whispered reverently.

"Hold it down!" the major yelled to the beggars who were trying to scale the wall. When they saw his pale face and blond hair, however, they crossed themselves and scurried away.

"There was plenty of cloud cover," the general was saying, "plenty enough to keep us from being spotted prematurely. We buried the boats at the low tide mark and made a dash for this very wall. I was sweating like a damned boar. Lips dry, bowels anxious, that sort of thing. Then we checked our watches and split up." He paused, bit bravely at his lips and shuddered again. "I never saw them alive together again. Brave men, gentlemen. As brave as any man could be."

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"We know," the colonel said, chewing silently on his ice cubes.

"We understand," the major said.

"Well, I quickly stripped off my wetsuit and straightened my tie. There was this devilishly clever little mirror strapped to my wrist which allowed me to make a check of my hair and lapels. And then . . . I was over the wall!"

"Fantastic!" In unison.

"Foolhardy," the general corrected, "but I was young then, and didn't know about things such as reservations. Naturally, I was accosted instantly by the *senor maitre d'hotel* who demanded my card. Cool I was, if I don't mind saying so myself. I reached carefully into my jacket pocket and pulled out the carrier. Forty-seven different credit cards, gentlemen. Forty-seven! The bloody bastard nearly lost his pants when he saw them. Immediately I was shown into the casino and handed a pile of silver chips." The general allowed a sly smile to snake across his wrinkled lips. "Naturally, with the microsonic device strapped to my not inconsiderable chest, I was able to disrupt the workings of the big wheel and won a veritable fortune. I cashed in my chips and ordered food for everyone. You should have seen the look on the cashier's face when I paid the poor bastard in hard, cold money."

"Diabolical," the colonel said reverently.

The major was too shocked to utter a single word.

"Well, it stands to reason I could not remain there very long without causing undue and premature attention, so I left as quickly as I could before I was stopped, and I moved to the next hotel. Again I did the same, and again and again all the way down the line until I had struck and disrupted . . . I believe it was eleven of the foreign bastards."

"Your commendation says thirteen," the major ventured.

"Ah, perhaps it was, perhaps it was. But naturally the word traveled fast and I soon sensed that it was about that time, time to move into the city itself. Balboa had grown rapidly since the original French and Australian monies had reached out to suck in more, and it was difficult finding my way with what ancient maps had been drummed into my brain. But I knew that what I needed first was a place to stay until the sun rose and the shops were open and vulnerable. What I found was . . . what I found . . ."

"Estrillita?" the colonel prompted gently.

The general sighed. "Estrillita. A slip of a girl. Barely came up to my chin. I saw her for the first time, standing there on the corner, calling out to the tourists, greeting them in seven different languages. Behind me I could hear the uproar in the hotels beginning to spread. The others, I imagined, were perpetrating their own clever deceptions, leaving early and paying their bills in cash. The

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night clerks wouldn't know them from the real clients, of course. Panic, I realized, might peak too soon, and I am ashamed to admit that I panicked a little myself just then.

"Quickly I hurried over to the dark-haired lovely and smiled in my best *bueno suave* manner. She nearly swooned at the size of my card holder, and we disappeared into an alley which led to the rear entrance of her opulent suite. A beautiful girl did I say? But only one of many, and there were so many in that sprawling accommodation! I hardly had time to express my apologies for interrupting them when they gathered around me, feeling my holder and practically drooling in anticipation of a huge score.

"My heart quickened, hardened, and I proceeded apace to sample the wares here and there, saving myself for Estrillita and the *grande finale.* And when it came, with my heart breaking that I had to do what I had to do, and when my holder was pulled out and revealed all that lovely folding stuff, she screamed and fainted. To this day, gentlemen, I shall always believe it was ecstasy that prompted that momentary aberration.

"But," said the general, visibly pulling himself together, "the sun was already well into the sky and I had still more to do. I raced into the street, straightened my tie and began a shopping spree that would have been the envy of the most avaricious socialite. Package upon package upon package was carted to the hotels I named, all paid for, all owned outright and free. Once, my cover was nearly blown when I came across Billy in a serape boutique; but our training held fast and we soon parted without a single sign being passed between us."

"Brilliant!" said the colonel. "But how—"

"You are anxious to learn how I arranged the final massacre? It was simple, Colonel and gentlemen, and at the same time deucedly complex. By now, of course, the local police establishment had been alerted that commandos were working the city, throwing innumerable shops and resorts into utter chaos. Banditry sprang full blown in the wake of my outfit's raids, Columbia was reportedly already panting at the border, and by noon the military police had been called in to preserve a semblance of order. I, however, had changed into a chic brown-and-gold minicaftan I had purchased in one of the more elite Afro-Incan emporia and had skindyed my complexion to that of a visiting Irani merchant. Again I struck, again and again completely without mercy and so rapidly that I soon lost all track of time. Irani, Frenchman, Brazilian, once daringly an American, then again a gaucho dope smuggler. I raced from quarter to quarter spilling my wares and stepping aside to let the grimy hands of greed take over my work.

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"And then I heard the first shot. No lasers, thank heavens. But a shot. A . . . shot. "

"My God!"

"My God!"

"My God, I thought, they've caught someone and the game is up for grabs. The entire city seemed to halt dead in its progress. People milled about on street corners, waiting for the horses to clear the area so they could gawk at what was happening. The police were on horses, you see, because they had to be taller than the crowds they were trying to contain. Soon enough, however, there was a procession marching down the center of the main boulevard, and I spotted the bodies of two of my men in the back of an open ambulance. The worst fate of all, gentlemen: they were to be dumped without ceremony at the ass-end of the Canal.

"I sidled cautiously into a passageway and hid in the shadows until the macabre parade had gone its way, then darted around the corner into the Roosevelt Bar where Billy and I had arranged to meet in case of just such a damnable emergency. He was there, all right, sitting at the bar and drinking glass after glass of fruit-strained tequila. I pretended not to notice him, but nevertheless I could see he was trembling badly. The murder of two-fifths of our team *cum familia* had affected him profoundly; yet we still had four hours to go before our submarine rendezvous! I tried being the loud-mouthed, semi-drunk, outback Australian tourist gambler, but my accent kept slipping and I could see that the bartender was preparing to notify the authorities. It was a dangerous situation, but I took a wild chance that Billy would recover with action being thrust upon him. Reaching into my hip pocket, I pulled out a wad of bills, showed it around to the patrons, then flung it into the air! Ignoring the subsequent hysterical screaming, I dashed outside, back to the main street and headed for my final checkpoint. It had to be done, I knew, and I only hoped that Billy would be able to take care of himself."

"A drink?" the major asked. The general, blinking at the interruption, nodded and had emptied the tall glass before the waiter had had time to bring him the change. "Another," he ordered peremptorily and a glare brought the colonel's sleek wallet into the open.

"It was hard. I didn't like deserting my men like that. But there was a balance of payments at stake, gentlemen, and a world I knew and loved and had sworn to protect at all costs."

"Really, sir, nobody doubts you," the colonel said stuffily.

"Well, it didn't take me long to locate the shop I required, nor long after that to uncover the minibus where Craig had stashed the final blow. For a while I kept seeing Estrillita's lovely face floating in front of my eyes, but I soon attributed that to the heat of the day and the fact that I

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was doing right. It was nevertheless difficult, gentlemen, to realize that I had lost a bit of my soldier's heart down there in the alley. Then I loaded the bus with the gear I had purchased from a very nervous shopkeeper and headed out toward the schools.

"It was easy, at first. I handed out the bubble gum and chocolate bars wrapped in large denominations. The children were quite rightly wary, of course, but when I explained how they could quintuple their treats by simply taking the bills to their favorite stores and exchanging them, they were more than eager to take hold.

"It could not last, of course, and I didn't expect it to. The police were being notified of every move I made, every sale I engaged in, one step behind. At the fifth school, one for wealthy young maidens, a patrol car roared around the corner, siren whooping, hoverfans blasting like a constipated lion. I flung one last batch of candy into the air and was off like the proverbial shot, heading for the quay that stretched into Balboa's harbor where the famous floating crap game was anchored. The glass in the minibus shattered as the police opened fire, people screamed and dashed into ditches, doorways, each other's arms. Dust rose and covered me for a moment, but a wind came up and blew it away and I was target *numero uno* once again.

"But I kept the mission foremost in my mind, thank God. As I drove, I threw out the wads of bills Craig had secreted under the driver's seat. Hundreds, thousands fell into the air. The first police car, in fact, immediately counted itself out of the race and into the money. People began following me, passing the word until I was forced to cut my speed. It wouldn't do. I would be caught. The city was close to rioting and I didn't want the authorities to put all the blame on me. Finally, I was left with no choice but to abandon the bus. I grabbed what was left of the money and pushed through the crowd toward the tip of the endmost pier. Once in the water I would be safe. The flotation device strapped to my waist would take care that I made my appointment with the submarine on time. But if only I could get to the water! I pushed, I pulled, I handed out bills, and I took the kisses and pummeling as my due.

"And there it was! Safety! I turned around for a final look at the city I had liberated, and a policeman took a shot at me from the tin roof of a shipping shed. A man went down in front of me, blood oozing slowly from his white seersucker. The crowd, stunned, froze in horror, a moment which allowed me to activate my secret propellant strapped to my calves. I turned, then, just as the policeman fired again. This time he struck an old man who was kissing a woman who was trying to recover several bills that he'd dropped. The old man shrieked as the bullet, nasty

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thing, entered his back; he stood stiffly, pivoted and pointed the accusing finger directly at the policeman.

"As I dropped into the water, the last thing I saw was the shed slowly being engulfed by a veritable sea of brown-skinned humanity."

There was a long and awkward silence, broken only by the drifting faint sounds of the Mardi Gras moving down the beach toward the Turkish Embassy.

The colonel cleared his throat.

The major popped a beggar on the top of his head and pushed him from the wall.

"Later," the general resumed, more quietly, more subdued, "I heard about Craig and old Billy. Billy had managed to unload all his monies and had taken to the water in front of the Paradise. A lifeguard spotted him from a police description and drowned him. Craig was caught in the library, secretly adding pages to the most popular books. He was bound and executed. A massacre, indeed! I wonder whose side they're talking about?"

"But General," the major said after a suitable interval, "you accomplished the mission, after all is said and done. Once the word of the bill raid spread to the rest of the Isthmus there were massive riots throughout, demanding the same easy way to pay their bills without interest or due dates. Five months, wasn't it, Colonel? Five months before the government applied to the United States for foreign aid?"

"Five it was," the colonel agreed. "Three whole months ahead of schedule."

"And the General became a hero."

The general, however, was oblivious to the compliment, had risen from his seat and was standing by the wall, staring toward the submerged concrete marker commemorating the USA's victory over the insurgent enemy.

"A hero," he said as the band began playing in the ballroom, underscoring the comforting sound of the roulette wheel's clicking, the crap tables' chatter. "Some hero. Craig, Billy, the others are dead. All dead. Even Estrillita never recovered. She couldn't count, you know. Starved to death. And only me still living here. Only me left with the memory of that horrid day." He turned, and his companions gasped at the look on his ancient face. "Only me, and the dreams of Estrillita and what could have been had I but the right cards to play. A victory indeed, gentlemen, but a bitter one, a *very* bitter one."

The major moved to reply, but the colonel touched his arm lightly in warning.

"Now," the general said, smiling once again, "I have to call my grandnephew. He's in Treasury, you know. Keeps the old pension rolling in. Do either of you gentlemen have a dime?" ■

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Technology changes human behavior. But human attitudes . . .

Henry Melton

3 coffins

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"Simms!"

She winced. Another interruption.

She canceled the radiation dosimeter display and reached for the com switch. Something had to be up. With the Callisto breakoff only hours away, it wouldn't be like Jeb to call and gab. Or to have her hold his hand either. She killed the angry flashing in the center of her control panel and the com screen lit.

"Simms!" Yes, it was a most businesslike bellow. "Simms, we have a blip in the prohibited cone."

So, she thought, it was serious. With breakoff so close, the cone of space that the superpowerful pressor beam would occupy had *better* be clear of all ships. That is, unless the ship *wanted* to be violently ejected from the solar system when the beam, that was now shifting the orbit of the Jovian moon Callisto, focused all of its cosmic tide of energy into a paltry few tons of ship.

Jeb Pearce, Duty Boss in charge of the beam-switching operation, continued. "Now, it could just be a cometary object from outsystem. The orbit is compatible with that. But it *could* be a freelancer coming in from Saturn/Trojan/A."

He looked off-screen to the left, squinting to read something. "Hod's best data as yet gives a density of about .35, and he gets spatially coherent reflections off it. Polished hull metal, I just bet! And if it is still in the red zone five hours from now—kerzongo, no more blip this side of Pluto! Susan, I want you to go out and take a look. The orbit has been transferred to your ship's memory. Get going."

Susan Simms smiled at him. "Watch that beam of yours! I would like to make it back to the fleet by mealtime."

He still frowned. "Don't count on it. That blip's a long way out there. Don't worry about the beam. I can and will make dead sure that you are out of the way before breakoff. But a shutdown won't look good on either of our records."

"Roger, Jeb. I'll see you when I get back."

He finally smiled, just a bit. "Thanks, Susan. Make it a quick trip. The schedule is getting tight."

Susan Simm's ship, the JSPS-453, also called *The Flying Yo-Yo*, broke the few dynes of force that tied the ships of the *Jovian Satellite Project Fleet* into one flexible organism. The weak tractor-pressor beam array that made her ship one nodule of matter among many in the three-dimensional force web winked out.

Susan overrode the *Yo-Yo*'s brain as it automatically tried to find a safe, conservative flight path. Time was too short for that. The mighty beam that was nudging Callisto out of its age-old orbit by stealing momentum from Mars could not be allowed to intersect Jupiter, not without disaster. It could easily vaporize the beam projector and a hundred ships around it. And in all of the crowded solar system, there was only the one prohibited cone of

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space down which the active beam could be safely channeled. Nothing could change Callisto's orbit any faster, so its eclipse was her deadline.

She brushed back her hair. One figure on the optimum flight path caught her attention. Closest approach to Jupiter was four gigameters. Her thoughts skipped back to the radiation dosages she had been reviewing.

Four gigameters. Too far into the radiation for comfort. More radiation was what she didn't need.

But if that was a stranded ship out there . . .

She accepted the distance. One button, and she was underway.

The extra radiation would force her decision that much sooner. Should she have the child? She would have to leave space . . .

Her eyes went to the exterior viewscreen. The massive, brightly colored atmosphere of Jupiter was directly ahead, tied to her ship by her ship's powerful tractor beam.

She loved conning a beam ship. All of the good pilots felt the same, and the pet names of their ships showed it: *Tarzan, Trapeze Artist, The Great Polanski.* Her tiny ship was her home. Were she to leave it for Earth and a child, what would she do? Could she stand the change,

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becoming a single mother, alone on Earth, so far from the life that she had made her own?

It had been different before, when David had been with her. They had intended to take an extended leave in a few years and have a child on Earth. When the child was grown and trained, they expected to come back to space and run one of the many shuttle routes.

David had been a Khedourist. That a life fully employed in space would prevent him from having the child that was the central point in the Khedourist philosophy was one of the contradictions with which he had been forced to live. He had learned to be happy in the waiting.

The beam ship was silent in its pull toward the planet. She had to build velocity directly toward it in this first part of the course. She welcomed the quiet. Lately, she had much to think about.

Yo-Yo bobbled in its flight path. With a bleep of warning, it unlatched from Jupiter and started to look for another mass. Susan reached out and canceled its flight volition. *Yo-Yo* didn't like the radiation any better than she did. She would have to program the flight manually.

Intercept point was 63 gigameters out beyond Jupiter, 93 gigameters from the fleet. She had only 253 minutes to get there, take care of the problem, and get out of the way.

Figure 20 minutes for the inspection, and another 10 if she had to move the object, plus, to be safe, another 5 to get clear. That left only 218 minutes. For a standard flight, that would mean 109 accelerating and another 109 decelerating. Estimate some loss because of the maneuver near Jupiter and hope that it can be done in 100-minute laps.

Two hundred and fifty gravities. That was a lot of push, especially for a singleship. She checked her energy accumulator.

There was no way that she could handle 400 minutes of 250 g's. Getting out there was no problem, but the trip home was going to take a bit longer—no 250-g sprints then.

There was no time to waste. *Yo-Yo* had been pulling along at a leisurely 100 g's. It was time for something more fancy. She settled herself into the control couch. She double-checked; everything vital had to be within reach. Enough of the ship's acceleration would leak through the beam's imbalance to keep her under several gravities.

A push-pull was about the only way that she could get the sideways vector she needed. There weren't any usable anchor masses fore or aft.

A hefty tractor beam flashed towards Callisto. A similarly-powered pressor beam lanced down into Jupiter. It was wasteful of energy, but it was the only way to get there from here. *The Flying Yo-Yo* moved out.

She babied the verniers, trying to get maximum speed out of the poor mass configuration. The semicompensated fore section of the ship

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groaned under the massive forces. It had been years since she had tried to push-pull with such high magnitude accelerations.

Years, she mused. Two years in fact. Her mind shied from the thought. No time for that now!

But the memory was deep. She would never forget.

When she had met David, she spent the first few hours trying to reconcile this quiet, cheerful, thoughtful man with his reputation. Was this *really* the singleship pilot who became a system-wide sensation when he ducked down close to the outer edge of the Jovian radiation belt and push-pulled himself to nearly 10 percent of the speed of light in a bound orbit, circumnavigating Jupiter at the last in 31 minutes and 9 seconds? All she could get from him was a sad smile and a tale of the trials and tribulations of a pilot who had tried a silly stunt without official permission. The Fleet Captain had not been happy with the damage done to the ship. Under 9000 g's, the fore section of David's ship had flowed like heated wax.

Susan grew to know him as a serious and gentle man who saved his violence for the control console of his ship. That gentleness, more than anything else, was what had drawn them together. Their easy friendship as singleship pilots of the Jovian fleet quicky turned to romance. Childbirth was forbidden in all of the Great Terraforming Fleet of the planet Earth, but marriage never was.

Their first months blazed like the sun in her memory, and that early love had mellowed gracefully into a bond of common thoughts and firm mutual respect. Their love never stopped growing.

They planned their future, thinking of the time when they would return to Earth and have their fertility restored. Her David had been a Khedourist. He took seriously that dictum: *Let each person make the next generation better than his own.* Their children would be an asset to their world.

The happiest times of her life were spent off duty in the dwelling formed by locking the hatches of *Tom Swift*, David's ship, and *The Flying Yo-Yo* together. It was home.

They had met while the fleet was still scouting and preparing for the job of removing the terraformable giant moons to sunward solar orbits, far from Jupiter's fatal radiation belt. Their marriage lasted until the Hera operation.

She had been in a slow orbit around Hestia when David called. When the signal arrived, via the fleet relay, she knew that he had finished his job on Hera.

The nature of their jobs was changing as the Jovian project proceeded. She remembered the scores of asteroid-sized moonlets that they had towed from that gravity well with their singleships. All of the

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small stuff was gone now. Only the real moons, those known from pre-space times, were left.

And those were massive. It took far more than a little singleship to budge one of them. At first, the Fleet Captain had tried an array of heavy transports, working in concert. She and David had been among the loudest to cheer when the attempt was judged inefficient and unsafe, and a heavier beam ship was ordered from Earth's factories. They had been forced to team up to handle one of the transports, and it had put their marital harmony to its strongest test. The physical grind was nothing compared to the mental strain that was inevitable when one singleship pilot had to watch another con the ship. If they had enjoyed it, they wouldn't have been singleship pilots. When the super beamship *Steamboat* arrived, they had been relieved to go back to what they liked best.

The heavier moons had come up on the fleet's list and many jobs changed. She was mother hen to the ground crew doing the final testing and checking of the moon Hestia, prior to the scheduled moving time. David played the same role for the Hera ground crew.

He was happy to be finished, and his face showed it. "How soon will you be finished? Any chance of lunch tomorrow at the fleet?"

She shook her head, "*You* may be finished with the groundwork, but your crew started two days before we did, too. I've still got a gaggle of geologists, in raptures over a chondrite cliff, and it looks like I am going to have to lift their dome off by brute force. I keep telling them that it will still be there after the move, but they don't listen. I doubt that I will be getting any sleep for another fifty hours. Sorry."

She went back to her interrupted calculations; the reply time through the fleet relay was better than six minutes.

He finally spoke, "It sounds like your geologists are just like every crew I've ever lifted. I sympathize. Do you mind if I come around and kibitz? I've got the next few days off. And I really don't like being so close to *Goliath*'s beam. I wouldn't mind putting a couple of dozen gigameters and a planet in between me and it. What do you think?"

Susan didn't blame him for his caution. *Goliath* was to replace *Steamboat* as the prime mover of the Jovian fleet when the smaller *Steamboat* showed signs of strain as it first started to move Demeter. *Goliath* was a *giant* beamship. Hera was its first trial. The power of the beam had Susan and David both uneasy. Hestia would be next on the list, and when that time came, Susan intended to be far away.

She hit the transmit switch. "If you come here, I'll put you to work! Come at your own risk. I plan to break for lunch in another four hours, about."

She expected that he could make it in that short time although Hera was

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on the other side of the Jovian system, better than twenty gigameters away. She knew that he couldn't resist the challenge.

Ground crew called her before her husband's reply had time to arrive. She put a tractor beam on the surface and pulled *Yo-Yo* down into a closer and faster orbit. She held back a little, so that she could hear his answer before she went behind the moon and out of radio contact.

His voice broke the beginning static on the communications beam. "Good! I'll be there for lunch. Don't cook anything. The steaks will be on . . ." Radio eclipse came. She turned off the com. He would understand her silence.

It was an hour later that the emergency call tripped her com unit. "General Emergency! General Emergency! This is *Steamboat.* We've got a fire . . . an unstable beam . . . no control . . ."

The broadcast signal, down in the lower radio frequencies, was cluttered with Jupiter's own radio static, but the message was readable. The strain of moving massive Demeter *had* been too much. When the time had come to release the moon into the care of the Asteroidal fleet, the beam would not de-power. The beam captain had redirected the beam into clear space and tried the emergency dumping procedure, only to have the equipment blow up in her face. No "fuse" had yet been developed that could reliably take the back-power of the heavier-class beams. Fire and confusion ruled the ship. The shouting could be heard clearly over the com officer's unsteady voice.

Susan made a quick call to her ground crew and punched in a rough course. *Yo-Yo* shoved off towards the injured ship.

Regular com traffic bands were alive with reports as the original call for help swept outward at the speed of light. All who could were dropping what they were doing and plotting intercepts. Advice abounded from those who couldn't. The space around *Steamboat* would be potentially lethal. The moon-giving beam was still active, sweeping space like the opposing beams of a rotating lighthouse.

David called on the general band. He would be there well ahead of anyone else. He had been traveling at high speed, and in roughly the right direction, when he caught the call. Susan was not surprised. *Tom Swift* was as much a part of him as his legs, and he always seemed to be able to get anywhere in the Jovian system faster than anyone else.

She allowed herself to worry about him, although there would be no danger if he were careful. A pressor beam only transferred power if there were masses in both halves of the bidirectional beam. Momentum was always conserved, and no momentum could be given a mass if there was nothing to receive the reaction.

She listened carefully to the reports. The com officer on *Steam-*

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boat gave his ship's speed of rotation. She tapped that last item of data into *Yo-Yo*'s brain. The answer was reassuring. Because of the speed of light limitations on the beam, any mass beyond a limit of about ten thousand kilometers would effectively not exist for the beam.

Evidently, her reasoning was duplicated elsewhere, for a general order came over the com: All ships were to keep that ten megameter distance except under the order of the rescue leader. As the first to arrive, that job fell to David. Susan changed her flight program minutely to designate the new stopping distance.

Fleet HQ called designating com channels: *Tom Swift* on one, Fleet telescope reports on another, *Steamboat* on a third. As they came in, she set her com to scan them selectively. It was best to have all of the little details taken care of. She would be among the first half-dozen ships there, and she was sure that David would be using her. This was not the first emergency that she and her husband had teamed up to handle. They were the best.

On the rebroadcast relay, David's voice reported being within visual sighting distance of *Steamboat*, but well off-axis of the beam path. He was going in closer.

A scream echoed in Susan's cabin as the com switched to *Steamboat*.

"I've got to get out of here! The beam is unstable! It'll blow!"

"Hey! Johnson! Get away!"

"Don't you understand! Abie's dead! I won't let it get me, too!"

"Johnson! Galta, stop him before he opens the hatch! We've got to keep our space clean of matter while the beam is still hot!"

Susan could hear a fight, a thud, and then a clang. People on *Steamboat* shouted, but she could not make out what they were saying.

The com switched to the abrupt calm of a single quiet voice, the Fleet telescope spotter. "Hey, I see him! He is tumbling. He must have on the emergency suit." In a cool monologue, the man at the telescope described the uncontrolled path of the man in the highly reflective suit. He plotted the man's path by eye and predicted what would happen. The man had left the rotating system of his ship, but the ship still moved beneath him.

The rogue beam swept up and caught the man in its grip.

For a half-second, nothing happened. But then the voice on the com halted in mid-word. His voice was quieter when he continued.

The entrance of the man's mass into the beam must have coincided with an instability in *Steamboat*'s ruined system. An electric-blue flash of superheated plasma streamed from the open hatchway of the huge metallic cylinder. The devasting beam of force wavered as the ship shook with the force of the explosion. A second luminous blast kicked the heavy ship into another rotation, sweeping the fading beam across one

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tiny, ill-fated singleship.

The edge of the sweeping beam sliced across *Tom Swift* like an ax.

The voice on the com spoke quietly as it described the trajectories of the two masses, streaking in opposite directions from the wreck of *Steamboat*. It did not describe the crumpled and spinning singleship tumbling down toward the great gas-giant, nor the fragmented mass of plastic, cloth, and flesh that had once been a man.

Confusion reigned again on the com bands as pilots broke their instructed radio allocations to find out what had happened.

Susan did not understand. She thought that someone had said that . . . but no, that couldn't be!

David was in trouble. She needed his orbit. She overrode the automatic com scan and checked the likely frequencies. Finally, through the confusion, somebody called for orbital parameters on *Tom Swift*.

But before the reply came, a commanding voice preempted the band. He called for quiet and asked for Susan Simms to report. Her regular com chimed her personal call. On the adjacent band, still another voice asked Susan Simms to please call Fleet Com Officer and report. The request was firm, insistent.

She reset the com to reject entirely the powerful fleet rebroadcaster system. Instead, she manually tracked the weak signals coming from the rescue ships themselves. Their voices were low and solemn as they described the molten wreck of *Steamboat*. But the orbital parameters on *Tom Swift* finally came.

It didn't look good: *Tom Swift* would penetrate the radiation belt in fifty minutes. Susan waited impatiently for a follow-up as she hurriedly tried to punch in the new orbit. She kept making errors. Her mind wouldn't click right. Didn't they know that the radiation in the belt could be fatal? No rescue attempt was being mentioned. Nobody talked about it. David's beam generator was out. Couldn't they see that? His whole electrical system was likely fried. That would explain his radio silence. Wasn't anybody going to save David? He would *die* in the radiation belt!

If no one could spare the time to save a man's life, she would have to do it alone. Angrily she stabbed at the controls.

Yo-Yo spoke numbers. There were ship stress limitations, near-lethal residual cabin gravities, energy use limits—the brutal math of forces, matter and time.

She could not, it told her, reach him and stay out of the higher radiation regions herself.

But there was no question. She set the new course.

Her powered orbit dipped deep into the deadly accumulation of particles that had been growing there in that star-sized magnetic bottle for billions of years. Soon, she pulled beneath the falling derelict.

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With tight precision, she aligned the two tiny ships with the boiling, swirling surface of the greatest planet of the system. A double-beam lanced out. The pressor forces shoved, killing the downward plunge of *Tom Swift* in one short burst of raw compulsion. *Tom Swift* fell outward from the deadly aura.

She slumped in her seat. The job was done. She had saved him. Now, she had to get herself out of the belt. Almost carelessly, she told the computer what to do. She fainted from the stresses.

They picked up both ships speeding out from the radiation belt. Susan was quickly sent to the hospital center. What was left of David's body was carved from the wreckage and sent to the fleet's morgue.

Yo-Yo spoke to her, gently shaking her out of her bitter, dreaming thoughts. The decelerating course was rapidly bringing her closer to the enigmatic blip. Fleet control was still trying to initiate communications with the object, but with no luck. If it was a ship, as all of the detectors seemed to indicate, it was making no attempt to reply.

It was also in an unpowered orbit, which made no sense. Something was wrong somewhere.

Jeb, on fleet com, read her the list of findings accumulated by the superior instruments at Fleet HQ. The object was small—less mass than a singleship. It *looked* small, from the radar and laser indications. The calculated density was small, implying vacant space in its interior. The hull was very definitely polished metal. It had to be a ship.

But . . . *why* was it out there beyond the orbit of Jupiter without the slightest indication of propulsive power? Ships did not coast in free fall out in the depths of interplanetary space, not since tractor-pressor beams were invented. It was too easy to set up a constant acceleration. Power couldn't be the problem. Spaceflight was cheap, and even if the accumulator of a ship did run low, there was a whole solar system full of kinetic energy just waiting to be tapped.

"It has to be some type of equipment failure," Jeb said.

"I would tend to agree with you," she replied absently, "but I am forced to say 'wait and see'."

Susan was trying to get a visual while the object was still much too far away. Jeb wasn't saying anything, so she added the end-of-conversation code and killed her transmission. His image, which wouldn't show his reaction to her sign-off for another ten minutes, stared out at her patiently.

Too late, she regretted hitting the switch. Jeb had always been so patient with her, and she was always so abrupt with him. She could never open up with him as she had with David.

During their short time together, David had often surprised her with his detailed knowledge of her likes

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and fears. She remembered the time *Yo-Yo* came out of the body shop after a brush with a small asteroidal rock, painted bright purple, her favorite color. She confided everything to him, and he remembered. He knew of her deadly fear of spiders, old food, and radiation. He knew her favorite room temperature, her favorite food, her favorite perfume. David knew how to quiet her fears, ease her nervous tension after a long day. With David alone in their cabin, she could be a little girl, allow herself to laugh, to cry, to be utterly senseless at the slightest excuse. He would be there; he would know. He would love, and never, never judge her.

The terrible aching loneliness rose within her, but she stifled it, firmly, quickly. She had a job to do.

The image of Jeb still waited. She wished that she had said some little, kind thing that would have relieved the coldness of her reply. Jeb was a good man, older than she, but they were as close as she let anyone be to her these days.

She condemned herself for her callousness and turned back to the job at hand.

The image grew rapidly on her screen.

The tiny, silent ship was spinning in the black void.

Susan squinted uselessly at the screen, trying to get a clearer look. Jeb had mentioned a rotation, but the fact hadn't registered then. Not a good sign.

She locked onto the unknown ship with very low power and pulled it closer. It was obviously not under power. It looked dead.

Details jumped out at her as it approached, turning in the weak sunlight. There was a *window* on the tiny, almost aerodynamically sleek thing. It reminded her of one of the old, old rockets Earth had known long ago. It had the same pointed nose, with no beam port of any kind. It even had fins, tiny ones near the blunt end.

It was like a dart, waiting for the target, lacking only the needle.

She wanted a closer look at that black window, framed in the shiny, bluish-tinged hull. The com unit interrupted her movements. The screen lit. Jeb waiting impatiently. "Susan, you should be there now." She was shifting *Yo-Yo* meter by meter, trying to get a good look into that window. "Could you give me a quick first report? Breakoff is only forty minutes from now, and with the communications lag, the sooner we decide what to do the better."

The black hole of a window rotated slowly into her view. The glass, or whatever the transparent medium was, had been pitted into a smooth frosting by micrometeorites. The ship must have been in space for ages to be so badly eroded.

She beamed a light into the opening. There was *something* behind the glass. She peered closer, and the obscured shape suddenly took recognizable form.

She gasped.

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Jeb was still waiting for her reply. He cleared his throat, preparing to add something. She turned quickly to the com unit.

"I'll call back later. Leave me alone for a minute!" She slapped the controls to silence and turned back to the tiny ship. She stared in growing horror at the face—the dead face staring through the terribly *old* window.

There had been a large group there at David's funeral. The platform had the local tractor-field turned down to a minimum for her, so that she could stand without the medic's help. She was still quite weak from radiation sickness.

Suited figures hovered quietly around *Tom Swift*, now shiny and unwarped after the efforts of the repairmen. But the work was cosmetic; the interior, the beam generator and accumulator were totally gone.

David, clad in a spacesuit to conceal most of the damage to his body, sat at the controls, a dead man—master of a dead ship.

From some lost incident in centuries past there had grown the tradition of sending those who had lost their lives in the Terraforming Project to the stars. Humanity was denied starflight, but not so its honored dead.

Susan was in a daze. The malaise of radiation sickness and the effects of counteracting drugs only accentuated the loss and disorientation of her new widowhood. She was wrapped in isolation. The sympathy of her friends could not penetrate.

The ceremony was brief. David's virtues were celebrated, his faults forgotten. His spirit was consigned to heaven, and his body . . .

Six men, properly suited against the vacuum, lifted the thick, thirty-five-meter-long cylinder from the platform with small hand beams. They shoved it toward a precalculated place in space not far away.

The beam ship *Goliath* waited in the distance, near the center of the great disk of ships that made up the bulk of the Jovian fleet. *Goliath* was beaming Hera, tying the momentum of the planet Mars to that moon. The invisible beam was a great pillar of force, shooting up at right angles to the fleet.

Tom Swift drifted into that beam, accelerating mildly as the force of the beam shoved the moon and the singleship at the same rate.

Breakoff approached. The beam captain signaled with a nod. The mighty beam shifted its direction a fraction of a degree, away from Hera.

Susan watched without comprehension. A hard, stubborn part of her refused to recognize what was happening. Bitterly, it blocked all emotion. It refused to acknowledge the tears, the words.

A hundred seconds passed as the kink in the beam traveled out. It took another hundred for the information to return. Then—it was only the mass of the singleship to balance the equa-

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tion with the planet Mars. The nudge given Mars was multiplied in *Tom Swift* more than one hundred quadrillion fold. The singleship vanished, accelerating too rapidly for human eyes to follow.

David was gone, the dam within her cracked and broke. It *was* true. David was gone.

The world blurred before her. *But . . . No! It isn't fair! David!*

She collapsed, curling up as she drifted to the floor. She did not want a world without him.

Strong gentle hands helped her off of the platform. She paid them no attention. David was gone. And she had never said good-bye.

She didn't hear the com unit paging her. She stared into the face of the dead . . . man.

All of the horror of David's loss came back to her at the sight of this other, prepared in death and given the same honors by his family and friends. His coffin spoke much of their regard. The expensive, finely-wrought little ship was just large enough to hold him comfortably throughout the eons of interstellar flight. She could see no obvious indication of a motor. She could imagine it launched, like David's, into the void by some other means.

The dead face peered out through his window on the universe. Susan could see the upper part of the shirt that he wore. The fabric showed intricate hand-embroidery in brilliant blues and greens.

The face of the . . . man was spotted with iridescent dust, silvery lines traced on the tips of his fur and around the large eyes. Eyes that would have been far too large on a human. The universe did contain others. So different, and yet so like Man.

The com unit was insistent, its jarring notes intruding unpleasantly. She tried to shake the sense of unreality that had come over her. She knew what Jeb wanted. She shouldn't have cut off her transmission. Jeb would know something big was up. He knew her too well.

What did she want to do?

Here was an alien. The first concrete proof that there *were* others out beyond Man's greatest barrier. The discovery would be hailed as a tremendous breakthrough in Man's knowledge of the universe. The body would be analyzed by the finest biologists of the solar system. The ship would be examined by every hard science that existed, tracing the unknown technologies that had gone into its construction. Perhaps the needed clues to a faster-than-light drive could be puzzled from the device.

The tiny ship with its occupant was a treasure house of knowledge—a treasure house that would be plundered ruthlessly.

Once its discovery was made known, its fate would be assured. No matter what individuals might think, the good of the whole human race would be the determining factor.

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Once the discovery was made known, there would be no turning back.

Once the discovery was made known . . .

"Susan, please answer!" Jeb's voice was insistent. "We get your carrier, but no signal. Please report. I need to know quickly. If you have any doubts, shove it out of the beam path and a decision can be made later. If you need any help, just ask for it. But, whatever you do, let me know what is going on, and soon! Time is running short. Susan, please answer . . ."

Time *was* running short. She wished that it wasn't Jeb. She could not lie to him. Even now, he must be making arrangements to dump the beam. He would be suspicious.

Emotions waged war within her. She knew the reason for her hesitation, but, still, she froze at the thought of turning this man over to scientists to carve up like a laboratory animal. What was her duty? What did humanity demand?

The com unit went silent. That was bad. Poor Jeb, what must he be thinking? He had trusted her to get him reliable information, and she had clammed up on him. He was stuck there with that beam and the safety of the fleet to worry about. He had told her before just how dangerous it was to shut down a large beam, forgetting that she had memories of David which would never let her forget just how dangerous. In a shutdown operation, *Goliath* would be no safer than *Steamboat* had been.

Her decision came in a flicker of peace. She looked down into that face. *Your sleep will not be disturbed.*

It was only a moment before doubts rose again, calling her a traitor to her race. Thoughts of right and wrong surged as a tide in her skull. So much could be gained from this tiny ship!

But the conviction held. This thing she was about to do was *right*. Perhaps the whole of humanity would condemn her, but *here* and *now*, for *her*, it was *right*!

She banished the nagging voices of doubt and turned to the com unit. She soothed the furious lights with the touch of her hand. It was time for action.

"Jeb, I'm sorry that you had to wait so long for my report. I found the object, and it will be all right to go ahead and switch the beam as scheduled. I'll be outside the danger zone by then. I intend to leave it where it is. Salvage does not seem advisable to me at this time." She paused. "Jeb, trust me for now. I will give you a report on it later. That is all for now."

She had to add that last. The report stunk of deception. It was not like her, and Jeb could tell that blindfolded. She would know if it worked in another ten minutes.

Her attention was drawn back to that tiny blue dart. It was still tumbling, the heritage of eons of faint gravitational fields.

The com screen lit. Jeb stood at his

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control station. In the background, she could see the other people who were working to make the beam operation come off smoothly. Jeb's face was dark and solemn. Susan could not help noticing that several of the other workers had stopped their work to hear his words.

"Susan, I cannot buy your report as it stands. I am not going to kick some object out of the system with nothing more than your okay. Up until today, I thought I could trust you, but I just can't believe what you said."

His familiar voice held a hurt, and a firmness, that she had hoped she would be spared. Her eyes drifted to his desk. His hand rested on a thick file. The title shouted her name. It was her psychological profile. He made no move to hide it.

It was a shock, a sudden slap in the face by one . . . one she had thought loved her.

His words continued unrelentingly. "The beam is my responsibility. It is my decision to make, and I *have* to be sure of that decision! We have little more than a minute to clear this up. You are going to have to tell me enough about this object so that I can be sure of what I am doing. I am warning you now, unless your story is good, I *will* dump this beam."

The com unit switched modes, awaiting her reply.

She took the few seconds to finish her self-imposed duty, that of killing the random tumble of the tiny ship and aligning it toward the stars. In her own way she did the dead honor. And it helped to dull her pain.

She had been half-expecting a rejection to her first report. She did not lie well. And she had thought that she would know what to say next. But now the revelation that Jeb had pulled her file from beneath the heavily-secured privacy seals, just as though she were some dangerous criminal, shook her confidence. The file spelled out every twist and turn of her soul.

Had she so misjudged Jeb Pearce that what she had thought might be love was really only concern for a good pilot? Did he think so little of her that he could readily pull her soul from a shelf and spread it out on the table, like just another of his engineering diagrams, to solve his problems?

She didn't know, not anymore. And she had no time to figure another plan. She had intended to tell the truth. Almost.

"Jeb." She had her voice under careful control. "It is important to me that you go ahead with the breakoff. I am sorry I have gotten you upset. The situation hit me badly. The object is a one-man coffin, with an occupant. I don't know how it came to be here in this orbit, but it is *old*. Jeb, I don't want some archaeologist *analyzing* this man in his rest! It is probably 'an invaluable historical find', but, Jeb, *please* send him back into space where his family and friends sent him. Please do this for me."

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Please accept this lie. She cut her transmission. She had done all that she could.

The Flying Yo-Yo stood off some five hundred kilometers from the alien's coffin. Susan watched the speck of light, magnified on her screen. The time to act was fast approaching.

No word yet from the fleet on the breakoff. She really didn't expect any. Jeb had only seconds to make his decision.

She didn't know what to expect from him. The Jeb she had thought she knew would have been moved by her plea, but would that Jeb have pulled her file?

Yo-Yo counted off seconds for her as she watched. She risked all for this deed. She prayed that she was right. She had only her conscience to support her.

The count lasted forever. The memory of David waited with her.

The time arrived . . . and the point of light that was the coffin from interstellar space became a line that flashed once across the black sky and was gone, returned to the outer void. It was done. Good-bye.

You people of other worlds! See us—Terrans! We have returned your dead to their rest undefiled.

Another, meeker part of her said, *Please do the same for us.*

After some time, the com unit beeped. She froze the navigation console with her course half-plotted, a slow pull back to the fleet. Lights flashed, and Jeb's image formed on the screen. He was alone. His expression was grim. She tensed up defensively.

"Susan, I am going to scramble this signal to your ship's code. Would you please activate your unscrambler."

The screen broke up into a random whirl of light. She hit the proper control and the image reformed. She was suspicious. What did he want from her now?

Jeb paused for several seconds to make sure that she would have time to make the alteration. There was still an almost five-minute delay in their communication and he could not be immediately sure of what she did.

"Susan, I will be brief. You know that I pulled your file. As a commander with people's lives at stake, I felt that I had to do so. But as a friend, it was inexcusable. I will not expect your forgiveness.

"I have just completed the job of pulling a rather extensive set of strings. Immediately upon your arrival at the fleet, you are to be sent to Earth on detached duty. The official reason is for you to assist the Bolivar University archaeology department with your observations of the coffin."

Oh, no! She had hoped to put off the investigation as long as possible. If they discovered her deception, and realized it was an alien rather than a man, there would be enough outcry in the Assembly that a Project heavy beamship would be diverted to the

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task of dragging the speeding coffin back into the system. Jovian Fleet HQ surely had its course on file. Recovery would be expensive, but it could be done.

"But that is not the real reason." Something in his voice brought her attention back to his face. His eyes showed his pain. "Susan, not two hours ago, I had your file open. I felt like I had your very soul in my hands. Susan, I cannot wash my hands of the matter and forget what I saw! Not ever! I saw your radiation problem. It must have been a blow to you when you found out that you had received forty years' normal radiation dosage when you went in after David. Permanent legal sterility is only weeks away for you if you stay in space. And you are so young!" He halted. She could read the confused anger on his face. "I mean, you are a Khedourist! I know how much a child would mean to you!"

The tears came in a rush. She could not stop them. He had put her darkest torment into words. What must she give up? Her life and usefulness in space, or the child whose training would be David's only stamp on the future? There was so much to lose!

"Susan, this detached duty will give you time to make your decisions without the deadline breathing down your neck. It was the best that I could come up with.

"There is another thing. I know that you still lied at the very last. I knew that when I made my decision to continue the breakoff. So we are both guilty of whatever it is that you have done. I have arranged a two-week gap between your arrival on Earth and the time you report to the university. Bolivar has the finest historical records available. Your fleet rank should get you access to the records you will need. You will have to make your description of what you *said* you saw airtight by then. I wish I could stop the investigation altogether, but it is out of my hands.

"You can expect a retrieval beam from the fleet in another thirty minutes. My calculations show that you don't have much energy left, and the sooner we can get you down to Earth, the better."

It sounded like the end of what he had to say, but he did not kill his transmission. She looked at his face. Her own thoughts were incoherent. There was too much to absorb at once. Suddenly, there was hope again.

"Susan?" His face was tormented, his voice was unsteady. "I am due an extended leave. If I can be forgiven, I would like to go with you. *Please*!" His hand reached out and killed his straining whisper. The screen went dark.

She was left alone in the silence of her singleship. Only the indicator lights gave any illumination in the darkened, familiar cabin. Again, it was time for decision. But this time it was easy. ■

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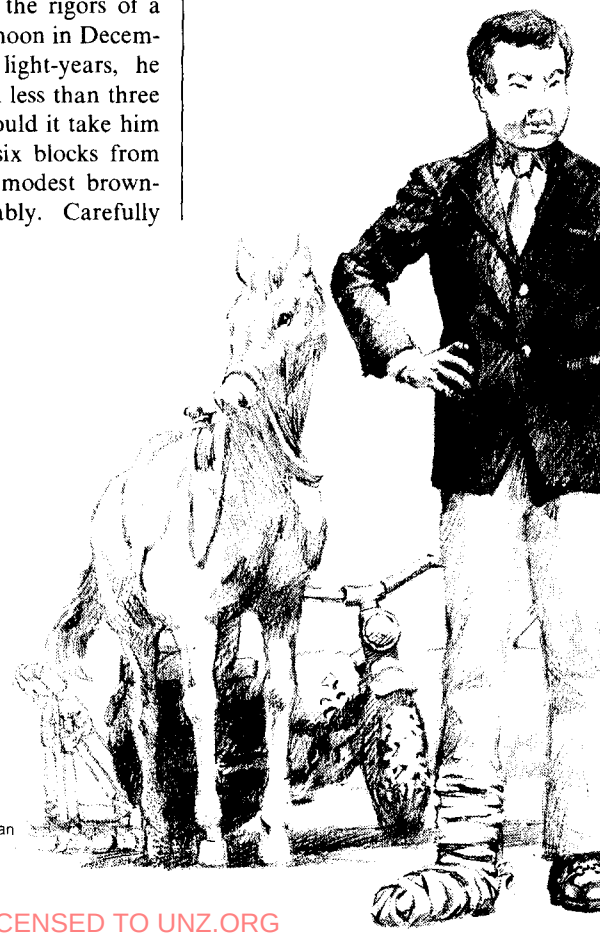
Chap Foey Rider stepped from the displacement booth of the Galactic Postal Union and into the ornate transit lounge of the Consulate General of His Excellency the Mandator of the Galactic Confederation. Assorted aliens awaiting their use of the facility slithered away politely as Chap Foey Rider made his way to the door, exchanging an occasional nod or footshake with rather less than his usual urbanity.

Retrieving boots, gloves, hat, coat, and scarf from the cloakroom, he prepared himself for the rigors of a foul Manhattan afternoon in December. Nine hundred light-years, he growled to himself, in less than three seconds; how long would it take him now to journey the six blocks from the Consulate to his modest brownstone? Hours probably. Carefully bundled, he pushed his way gingerly into the howling gale, muttering in the depths of his scarf.

He could not pretend to be pleased by the recent turn of events. The meeting with the executive loan committee of the First National Farmers and Murglepickers Bank of Rigel from which he had just returned had not gone well at all: politely but firmly the committee had rejected his carefully laid out proposals. And the atmosphere had been definitely frosty. There was no



Doug Beekman

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chance they would reconsider.

"—see no possible fashion in which your rather backward world can generate enough trade to accumulate sufficient hard currency to finance this project. Even if amortization were spread over a fifty-year period, which in any case would be contrary to our policy of—"

And so forth, and so forth, and so forth.

Bah.

And a double bah to pre-Christmas 51st Street at rush hour. The gale roared through the fiendishly-devised wind-tunnel canyon of buildings, the sidewalk was clogged with a lemminglike humanity, the street was jammed by a paralyzed mass of madly raucous trucks, buses, taxis, and assorted madmen in their personal vehicles. The whistle of a uniformed Irishman on horseback made his gold fillings resonate.

December 18, 1991. The much-vaunted March of Progress. Bah.

Gritting his teeth, Chap Foey Rider began to wedge his way through a phalanx of packages and fur coats. A retaliatory umbrella was thrust sharply at his foot; uttering a cry of anguish, Chap Foey Rider hopped grotesquely forward; his foot came down firmly in the droppings of what had clearly been a dog of dinosauric dimensions. As he staggered to the sanctuary of a corner lamp post, his hat was jostled off, caught by a gust of wind, and carried unerringly beneath the wheels of a sixteen-ton delivery truck. Hoarse laughter was salt on an open wound.

Grasping the post, Chap Foey Rider closed his eyes and breathed deeply, telling himself that at all costs he must master the sudden berserk rage which he felt about to engulf him—*he*, surely the most

children of
invention

The true test of intelligence is the ability to generalize information—and then use it.
Hayford Peirce

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placid and even-tempered of mortals! It was definitely too much to bear.

The icy air was pulled deep into his lungs; gradually his breathing slowed; his fists unclenched; his heart no longer pounded. He opened his eyes. Ah. A disciplined mind and the bracing tonic of crisp clear New York air. A sovereign remedy for the mental woes of mankind. Chap Foey Rider drew himself up to his full height of five foot six and swept an eye about him with lordly demeanor. Never should one let oneself become discouraged by minor setbacks, he told himself didactically. Had he not, for example, in spite of all temporary and derisory obstacles, effected *this*?

This was the sharp, pure, exhilarating air of downtown New York: even the exhausts of buses and trucks seemed to be instantly dissipated and whisked away by the various alien machinery that was so vigorously (and so profitably for Rider Factoring, Ltd.) scrubbing the world's air. His gaze turned to encompass the towering stacks of Con Ed—nothing: no smoke, no haze, no pollution. Whatever impurities the alien technicians had decided must go had done just that: gone, gone via industrial displacement equipment at faster-than-light speeds to the center of the sun.

Which unfortunately reminded him of his present bone of discontent. For the thousandth time he reflected dourly what a boon it would be for mankind (and Rider Factoring, to be sure) if he possessed the financial means to permit the installation of commercial displacement equipment throughout the world . . .

A few booths existed, of course, but solely within the Consulate and a number of the world's post offices, exclusively used for shipping mail, freight, and the occasional living being to the Galactic Confederation. Operated by suspicious and incorruptible Postal Union personnel, their security was as yet unbreached. Agents of 172 nations as well as the worldwide organization of Rider Factoring had been unable to procure either a piece of equipment or the faintest glimmering of how it worked.

Pedestrians and vehicles alike were now log-jammed into a solid tangle of mind-boggling density. The light turned green, then red, then green again as the crowd surged impotently in baffled fury. Horns blared. The light turned red. Chap Foey Rider waited patiently.

The secret, of course, could always be purchased from the manufacturers on Rigel. The sole snag was the cost: 10 billion SGU—Standard Galactic Units, and Standard Galactic Units only. Chap Foey Rider cast it into perspective: a jeroboam of Rider Factoring's choicest high-pressure smog, the rare and almost unobtainable *October 17, 1987, 5:34 PM, Gary, Indiana (Westside Firestation) Industrial Effluvium #6*, was sold FOB for a mere 2.74 SGU. Rider

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Factoring's gross profit was a modest 1.12 SGU. After general overhead and taxes, the net profit was a derisory .29 SGU. It would be a long while before Rider Factoring's account at the First National Farmers and Murglepickers Bank of Rigel would show a balance of 10 billion SGU. Bankers—men of small minds and smaller vision indeed.

Ah well, mused Chap Foey Rider untruthfully, who *wants* to make another million? So let the world struggle on with its own time-tested, thoroughly wretched transportation system.

Why should *he*, Chap Foey Rider, conceivably care?

He was roused from the soul-satisfying warmth of self-abnegation by a brusque intrusion upon his placid contemplation in the form of an enormous green bus making a turn into 51st Street. As the behemoth swung sharply about in front of Chap Foey Rider, its rear set of wheels mounted the curbing, traversed the corner, ran smartly over his left foot, jounced down into 51st Street, and disappeared.

Two months later, his physical suffering lessened, though hardly the affront to his self-esteem, he mounted the steps to the forward entrance of the ancient 707 with hardly a limp. Pausing for a moment as the line of passengers came to a sudden halt, he was disconcerted to notice within the cockpit window a few feet to his left a sight calculated to shake the nerve of the most travel-hardened veteran: the captain of the craft staring as if bemused at a map of the North Atlantic and Polar regions, his finger tracing a hesitant route westward.

Eyes closed, Chap Foey Rider gulped and reached for the support of the railing. I *know*, he said to himself, that the pilot is not *really* reading a Rand McNally map, he is merely reacquainting himself with satellite radio beacons or the like, he is merely—

The stewardess prodded him forward, the hatch slammed behind him with inexorable finality, and he tottered feebly to his seat, where he found himself remorselessly but implacably wedged between an elderly Yugoslavian nun telling her beads and a youthful American whose gleaming and roselike complexion, keenness of eye and sternness of chin, whiteness of shirt and blackness of tie could only suggest—alas, all too correctly—the Mormon missionary returning from his two years of proselytizing among the heathen. Strapping himself in grimly, Chap Foey Rider wondered for how long he could avoid conversation and how long it would be before he could decently order himself a quadruple cognac. No, all told, an inauspicious beginning, he muttered faintly, an inauspicious beginning.

The engines roared. Hands clenched, palms wet, Chap Foey Rider settled back for the long nonstop run from Paris to Los

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Angeles, California.

As the rickety Boeing bumped its way through the clouds over northern France, spilling most of the contents of the brandy so slyly ordered in Mandarin Chinese to forestall neighborly chitchat, Chap Foey Rider considered with distaste the events of the previous two months.

Three days had been spent in the hospital enticing various bones in his foot to reestablish their proper relationship to one another. The following six weeks had been spent with his foot in a plaster cast of ludicrous clumsiness, necessitating either crutches or a wheelchair about the home, and taxi service to the office and back.

Taxis, he soon discovered, were practically nonexistent at rush hour and, when occasionally available, frequently refused to haul him the few scant blocks to his office complex on Lexington Avenue. After a week of frustration, a chauffeured limousine was made available, but Chap Foey Rider chafed upon learning that this $32,000 ultimate in road vehicles took, on the average, seventeen minutes to convey him to a destination which he normally walked in six.

"Surely," he told his wife, "there is more efficacious transportation than this."

Subways, of course, were out of the question, save for the masochistic or simpleminded.

For a while he toyed with the idea of a helicopter: an enticing thought to be sure, but ultimately rejected as overly ostentatious and of dubious practicality.

There was no dearth of advice from his children and grandchildren. Upon the removal of his cast, he provided himself with a 1000 cc motorcycle and roared off to work in a frenzy of smugness and exhilaration, goggles gleaming and scarf flapping. In four blocks he was cited twice for noise pollution, was sideswiped by three taxis and a teenager, and eventually lost control on an icy patch, losing the cycle and nearly his life beneath the wheels of a garbage truck. Leaving the crumpled remains where they lay—eventually to be cited eleven times for illegal parking and littering—he made his way shakily home.

"A dogsled?" he wondered. "Hmmm . . ."

But the next day found him safely ensconced in his paneled office, having satisfactorily made use of a 10-speed bicycle. "Not perhaps the most comfortable means of transport, Miss Zielonka," he told his secretary, "but surely the most practical. Consider, for example, its salutary effects upon one's muscle tone. And, of course, upon one's appetite. It is altogether most satisfactory."

That evening, descending to the lobby of the Rider Factoring Building, he found that his carefully stored away and highly guarded machine was now missing both wheels, the horn, and the seat. And in his own

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personal building. Oh most unkindest cut of all!

That evening he scowled darkly.

Pogo stick? Jet Pack? Rickshaw? Sedan chair? Seventh Avenue dress cart? Snowmobile? Roller skates? *Ice* skates? Snowshoes? Bulldozer? Assyrian chariot with razor-keen blades strapped to the wheels?

Aha!

The answer of course was ludicrously simple: horseback.

Semiautonomous navigation, minimal fuel requirements, self-reproduction, adequate speed and stability, and an unequaled social cachet.

"Poor old buffer," said his wife fondly, shaking her head. "You really are in a bad way, aren't you? Why don't you take a nice long vacation in some tropical clime and forget about all this for a while? You know how the winters always depress you."

"Impossible," snapped Chap Foey Rider irritably. "Tomorrow I'll have to get the legal department to work on the question of the horse. Count upon it, the wretched bureaucrats of City Hall will have spent most of the last century devising laws to prohibit the private use of equine transport. But we shall see," he hissed, rubbing his hands briskly in anticipation of the coming battle, "we shall see."

Mrs. Rider sighed deeply and stomped off to bed.

Before the problem of the horse could be broached, however, Chap Foey Rider found himself unexpectedly called to Rome, where his area manager had reported finding an industrial spy who claimed to have possessed himself of a vital component from the displacement machinery of the Southern European Galactic Postal Center.

"Ready the plane, Miss Zielonka," said Chap Foey Rider. "Almost certainly this will prove to be the vital component of a 1927 Waring Blender, but one never knows. Departure in—let us say—two hours, and kindly book a table for dinner at Alfredo's. The Original."

"Certainly, Mr. Rider. Except the company plane is currently undergoing its 1000-hour medical. Pan Am or Alitalia?"

"Good heavens," said Chap Foey Rider, blanching. "Flip a coin, Miss Zielonka. And prepare me a sedative."

Rome was as chaotic as ever, though to Chap Foey Rider's eye the light covering of snow over Roman monument and Renaissance church rendered the scene curiously unreal. Perhaps it was merely jet-lag. From the depths of the company limousine Signore Rossi surveyed the passing city gloomily.

"Progress," he declaimed with an expansive gesture. "Ten years ago the municipality banned all private cars from Roma. *Magnifico*! And this week all taxi drivers, bus drivers, and subway drivers are on strike. As well as Alitalia luggage handlers." He smacked his forehead dramatically. "As well as prostitutes and headwaiters. I ask you, sir, I ask you. *This* is

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what is known as civilization?"

"It is certainly most uncivil of them, I *do* commiserate, Signore Rossi. But this car? I thought you—"

Signore Rossi winked. "An official government car, hey? Clever, no? Easy, yes?" His thumb rubbed his middle finger vigorously in the universal gesture.

"The Eternal City," murmured Chap Foey Rider, and turned the conversation to displacement booths. The industrial spy was now insistent on a meeting in neutral territory.

"Nice, Signore Rider. In France. An easy thirty-minute flight."

"I know where Nice is, Signore Rossi."

"I have a reservation on tomorrow's flight."

But the following morning, although the luggage handlers were no longer on strike, the Alitalia pilots were. "Sorry," said the ticketing agent happily, "everything" else is booked up. Come back in about two days, I think we can route you through Tel Aviv, Marrakesh, and Frankfort."

Chap Foey Rider spoke through clenched teeth. "I do not wish a Cooks Tour of the Old World, my dear fellow, I merely wish to go to Nice in time for this afternoon's appointment."

The agent looked through him. "Sorry, Pops. Next."

Nearly incoherent with rage, Chap Foey Rider eventually found an airport manager and purely by dint of bad temper found himself shortly thereafter en route for Nice. He took Air France to Geneva, from there El Al to Brussels, thence Sabina to Orly, the airport on the south side of Paris. A manic forty-minute trip by taxi got him to Roissy, the airport of the north side of Paris, barely in time to catch the UTA flight for Johannesburg, a flight which, for reasons unknown, stopped over in Nice. Chap Foey Rider arrived at Nice International Airport at 2:17 in the morning, where a telegram from Rome informed him that his industrial spy had last year been widely hailed as a Perpetual Motion Machine inventor.

Chap Foey Rider spent what remained of the night in the luxurious lap of the Hotel Negresco, then returned in the morning for his flight to Paris and transfer to a homeward-bound plane.

All of France was covered by impenetrable fog.

A limousine, hired at exorbitant cost, conveyed him to Marseilles, where eventually he managed to arrange for a first-class sleeping compartment on the train to Paris. Chap Foey Rider had fond memories of the European train service, dating back to the years before and after World War II. "A truly civilized country," he murmured to himself as he marched happily through the station. "*Le Bon Dieu* never meant the airplane to replace the train."

His enchantment dissipated as he inspected his first-class compartment. Two tiny bunks and a wash-basin.

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Enough room to turn around in, it was true, but Chap Foey Rider was, after all, a small man. The toilet was at the far end of the car, and although it was locked until the train pulled out from the station, already a crowd of strident Frenchmen milled about it.

"*Dining* car?" The conductor laughed uproariously.

Chap Foey Rider composed himself for bed, but sleep proved to be impossible. True, there never came that unsettling lurch of the airplane which unexpectedly leaves one's stomach at ceiling level and yet paradoxically turns one's thoughts to the heaving sea below, but as the train barreled around one highly-cambered turn after the other, Chap Foey Rider had the distinct impression that he was attempting to sleep either standing on his head or bolt-upright on his feet. The clickety-clack of the points was beyond description.

Eventually the conductor brought him his $9.00 breakfast. Cherished memories of hot, flaky, buttery *croissants*, golden butter, steaming chocolate, freshly-made strawberry jam were rudely shattered. His plastic package contained an American sweet roll, a can of imitation orange juice, a packet of New Zealand marmalade, and a cup of tepid instant coffee. A slip of paper informed him that the whole had been assembled in Dusseldorf, Germany.

"So much for the romance of the rails," he growled bitterly.

It was snowing as he emerged into the bleak early-morning light of Paris. As a taxi bore him away to the Ritz, he came to a decision. "Enough is more than enough. Total relaxation is imperatively indicated. But where *does* one relax?" A passing billboard caught his eye. Aha.

Where else but Tahiti? Pearl of the South Pacific. The last earthly paradise. The gentle Polynesian—Robert Louis Stevenson's "God's sweetest creation."

So be it.

All flights to Tahiti were booked full for the next three weeks, including the outrageously overpriced first-class section. "Bloated company plutocrats travelling on their padded expense accounts," thought Chap Foey Rider uncharitably with complete disregard to his own circumstances. At the last moment, however, a standby seat in garlic-class fell available and Chap Foey Rider found himself being trundled up the boarding ramp of that airline which herein shall remain nameless but which he himself always thought of, perhaps unjustly, as Air Chance.

Twelve hours to Los Angeles. A miracle to my grandfather, mused Chap Foey Rider, but yet is this not the year of our Lord 1992? Where are the long-prophesied supersonic transports, the ram-jet transports, the *hyper*sonic transports, the shuttle rockets, all the paraphernalia so devoutly believed in by our foolishly optimistic forebears? What do I find

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myself in instead? A 707, first introduced in 1958, Good God, was that thirty-four years ago?

Well, after all, the DC-3 had still been in service after thirty-four years, that would be about 1969, wouldn't it? Yes, definitely. And even unto the seventies. But on yet the other hand, one had not been absolutely obligated to cross the country in 1969 on a 120-mph DC-3. No, eight years before the turn of the 21st century, it was ridiculous to—

Ah, lunch. At least one still ate well in France. No, merely the second round of drinks. Brandy please. Sorry, sir, the caterers made a mistake in loading. . . . No more brandy, no more whiskey, no more Pernod, you'd better buy your wine now if you want some later, it'll be gone by lunch, a nice bourbon-Bloody Mary, perhaps, plenty of *those* available. Yes, repeated Chap Foey Rider to himself, an inauspicious beginning.

The rest of the flight managed to pass. Lunch was inedible, save for the bread and cheese, but the supply of bread soon ran out, as did the drinking water. Shortly thereafter, about the time the movie projector broke down (not that his headphones worked anyway), two of the three toilets proved inoperative and the nonpotable water in the wash basins also disappeared. Chap Foey Rider made serious inroads into a bottle of tax-free Drambuie. An eternity later, the Polar regions and a frozen-over Hudson's Bay safely behind them, the captain announced that as the plane too was now running out of fuel, a routine stop would be made in Great Falls, Montana.

Great Falls, Montana, pondered Chap Foey Rider, blinking owlishly, of course, that's all that was missing, Great Falls, Montana. The plane jolted as it encountered the first of the turbulence around the Rocky Mountains, and, as if by prearranged signal, water began to drip briskly from the ceiling onto Chap Foey Rider's head.

The plane lurched again.

The water was now quite definitely *running* onto his head. "Completely normal condensation," said the stewardess haughtily.

"Ah," said Chap Foey Rider meekly.

By the time Great Falls, Montana, appeared below the wingtip, Chap Foey Rider's head was nearly as wet as the palms of his hands.

An interminable number of hours later, having put up with an organized layover in Los Angeles of four hours of such unsurpassed horror that a battered mind had already mercifully suppressed the memory, a transfer to a UTA DC-10, and a flight of eight hours over nothing more substantial than the Pacific Ocean, Chap Foey Rider staggered weakly down the steps and into the quickening dawn of the South Pacific.

Already the air was hot, damp, and sensuous. Curious smells, of

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vanilla, coffee, coprah, and the heady pungency of frangipani, engulfed him. The mountain peaks before him were tipped with delicate rose by the rising sun, while behind him the dinosaur-bone outline of the sister island of Moorea loomed gigantic against the lightening sky.

An almond-eyed creature of ravishing charms slipped a garland of flowers about his neck. A trio of muscular guitar-wielding Polynesians clad only in gaudy *pareus* pounded out a driving air. A cross section of humanity, Tahitian, Chinese, French, American, and every conceivable mixture thereof, milled and pushed, screamed and laughed. Lissome girls were everywhere, jet-black hair hanging to their waists, brightly colored flowers behind their ears, Polynesian and Asian faces, Hawaiian and Parisian clothing.

An enticing mixture, an enticing country, thought Chap Foey Rider cheerfully as he stepped confidently forward.

Tahiti proved to be everything he had expected—and more.

Lagoons of the most infrangible blue and green and turquoise; volcanic shards of faery design thrusting 3,000 meters up into menacing thunderheads while all around the sun shone dazzlingly from an otherwise untroubled sky. Coral atolls barely above sea level, battered by Pacific rollers on the one side, surrounding a placid lagoon on the other. Sudden tropical downpours of startling violence, a curtain of water on one side of the road, bright sunlight on the other. Improbable double rainbows seemingly only meters away climbing out of a lead-gray sea and arcing away to hills of storybook green. White sand beaches sheltered by waving coconut palms, where cats and dogs stalked jewellike fish in the shallows, and the shallows were little more than ankle-deep for kilometer after kilometer. Black sand beaches, before which the mind recoiled and the eye blinked—volcanic lava pounded by the ocean over eons of time. Tropical vegetation climbing up the hills, flowing through the gardens, overwhelming the streets, a riot of flowers, fenceposts suddenly taking root and miraculously sprouting into hibiscus or mango or false-coffee. In the marketplaces fish of every description and color, strange, unlikely vegetables, and fruits of exotic cast. Sunsets dominated always by the fairytale mass of Moorea across the straits, a garish Hollywood prop erected solely for use by postcard photographers: the entire sky a pale lemon wash; or Wagnerian dramas of roiling reds and grays and blacks; or mysterious streamers of bluish-green spreading fanlike from the jagged mountain peaks and into the cobalt sky.

All of which was what he had expected.

As for the more—

"Where every prospect pleases," murmured Chap Foey Rider in a really quite ludicrous translation into

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the Cantonese, "and only Man is vile."

"I beg your pardon," said his companion, a Chinese pearl merchant with whom Rider Factoring, Ltd. had traded off and on over the years. Chap Foey Rider stubbornly repeated the sentiment in English, and finally in French.

"Ah," said Robert Siou Sing Moo politely, more mystified than ever. "You mean—"

"Exactly!" cried Chap Foey Rider gesticulating vigorously. "Here,"—high on the hillside terrace of the Hotel Taharaa at the soothing hour of the *aperitif,* mountains behind them, greenery below them, the darkening ocean and golden-rimmed Moorea before them—"we have *this.* In *town* you have. . . . " Words failed him.

"Cars," said Robert Siou Sing Moo blandly, waggling a finger at a passing waitress to summon a further bottle of champagne.

"Cars?" echoed Chap Foey Rider in a hollow voice. "Does the galaxy have stars? Never have I *imagined* so many—"

"We make good progress, hein? Lots of cars, even more than in America, I have in mind. Tahiti, *c'est la belle vie, n'este-ce pas,* is paradise, yes? French wine,"—he poured—"American car, beautiful Chinese girl, lots, lots Tahitian girl, ha ha. Ha."

"Ha." Chap Foey Rider reverted to Cantonese, wherein Mr. Moo's sentiments were generally on a somewhat more elevated plane. "I tell you, Papeete is like downtown Boston or New York at rush hour. Cars, trucks, buses, army trucks, army cars, back-hoes, graders, tractors, more cars. Why, the other morning when I came in from the airport the traffic going into town was stopped all the way out past the airport entrance—and that's seven kilometers!"

"Just the morning rush hour," shrugged Mr. Moo, "the rich folks who live out on the Gold Coast side of town. The Long Noses."

"Surely a sensible reason for living in Tahiti—to spend three or four hours a day in a traffic jam. Where did all these cars come from, anyway?"

"Oh, money from France, mainly. Building and then maintaining bases for their bomb tests. Lots of soldiers and sailors, lots of locals working for the government, lots of French prestige involved, hence lots of money. Now of course it's mainly from swindling tourists. It's marvellous," enthused Mr. Moo, "only one road around the island, only one little town, only 100,000 people on the whole island, and yet we *still* have 55,000 cars! Only America has more!"

Chap Foey Rider ground his teeth. "But this makes no sense," he protested. "There are, let me see, 50 kilometers of road on one side of the island, 60 on the other, that makes 110 kilometers of road around the entire island. Say 30 more for town, that gives a total of 140 kilome-

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ters. . . . *Only* 140 Kilometers."

"So?"

"So every car is an average of 4 meters long; 55,000 cars times 4, that's 220,000 meters, or—how really convenient the metric system sometimes is—220 kilometers of cars for a road system of only 140. Surely this is impossible, not say impractical?"

Mr. Moo was baffled before such horrid flights of whimsy, but recovered quickly. "Just wait till you see our Friday morning traffic jams in town," he said proudly. "Which reminds me, tomorrow *is* Friday, you'll dine with us tomorrow night? Just *en famille*, nothing fancy?"

"Delighted," said Chap Foey Rider.

After a late breakfast Chap Foey Rider incautiously drove his rented car into town for a morning's shopping. As Mr. Moo had boasted, the Friday morning traffic jam in Papeete was well worth seeing. Chap Foey Rider, in fact, was privileged to be more than merely an interested bystander, he was permitted to become an active participant. In the narrow maze of streets which surrounds the ancient marketplace, all traffic simply came to a halt.

Chap Foey Rider looked at his watch: 10:34.

His car was in the middle of the intersection before the doors of the *Banque de Tahiti*, hemmed in at every angle by "trucks," the picturesque Tahitian bus, which consists of appending a wooden superstructure to a long truck chassis, installing wooden benches, and throwing open the facilities to all comers, fish, turtles, pigs, chickens, cement blocks, mattresses, and even people, whoever takes a notion to clamber aboard. Air-conditioning is guaranteed, since there are no windows, or rather no glass in what passes for windows. The central marketplace is quite naturally the center of activity of these charming anachronisms, and it was here, on the Rue Gauguin, that Chap Foey Rider so rashly let his fancy lead him.

At 10:39 he squeezed out of his immobilized vehicle to join a group of noisy but still relatively good-natured drivers. A number of cars had attempted to mount the sidewalks in a vain attempt to escape, but these too in their turn had been engulfed in the ever-widening morass. At 11:10 Chap Foey Rider entered the *Banque de Tahiti*. It was deliciously air-conditioned, it was an opportunity to cash his travellers checks, and through the front door he could keep track of his car's progress.

At 11:30 Chap Foey Rider followed the lead of everyone else entrapped in Papeete on that infamous day: he went to lunch. At 1:30 he stretched out on the lawn which faced the waterfront, pulled a handkerchief over his face, and took his siesta. Ah, the tranquillity of the South Seas!

He awoke refreshed. Late afternoon. Nearly time for cocktails at Mr. Moo's. No progress appeared to

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have been made on clearing the streets. Climbing nimbly over the hoods of a number of cars, he soon found a series of uncongested back alleys and courtyards which eventually brought him to the residence of Mr. Moo.

Mr. Moo clucked dolefully at his guest's misadventures. "There is no cause for concern, however, it appears that tomorrow the authorities will attempt to use construction derricks fortunately already located at strategic spots to lift out a number of key cars." His face lit up with anticipation. "If that fails—as I imagine it will—then the army will dynamite the cars out."

"But why should the derricks fail?"

"How else should the derrick operators have an opportunity to watch hundreds of cars being dynamited? It will be a stirring spectacle."

"But my rented—"

"Ah. No worry. The owner of the agency is a cousin of mine, we will work out an equitable forfeit. And, who knows? he may even be insured."

Chap Foey Rider's appetite gradually recovered during the lengthy dinner which followed. Mrs. Moo was petite and quietly attentive, the half-dozen children sloe-eyed charmers. As the dinner and wine came to a close, Mr. Moo leaned over to pour brandy and light Chap Foey Rider's cigar. For a few moments he puffed away in total absorption; when he looked up to turn his attention to Mrs. Moo he was unsurprised to discover that he was suddenly alone at the table with Mr. and Mrs. Moo. The children were gone.

Chap Foey Rider pursed his lips. "Even here?" he inquired, gesturing broadly to indicate the subject of his query.

Mrs. Moo shrugged helplessly. "Of course. It's dishwashing time."

For the rest of the evening Chap Foey Rider contributed politely but vaguely to the conversation which flowed around him. He had suddenly recalled his recent stay in the hospital and its curious aftermath. Among other things, he had been presented by his son John with a stack of science-fiction magazines in hopes of beguiling the idle hour. These he perused with some interest. One magazine in particular contained stories with a recurring theme: Children as Aliens.

He was not unduly gripped by the cogency of the theme. It lingered, however, in his mind. Shortly after returning home, his foot in a plaster cast, he had become aware of a disquieting circumstance.

The Chinese couple who attended to the Riders' wants were on annual leave. A number of grandchildren were rather boisterously spending the weekend. Confined to his wheelchair as he was, one evening Chap Foey Rider lingered in the dining room rather than retiring to his study as was his customary habit.

A curious phenomenon presently manifested itself: his wife began

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carrying the dirty dishes to the kitchen. Chap Foey Rider's eyebrows rose of their own accord.

"Where are the children, to clear the table and do the dishes?"

Mrs. Rider shrugged. He looked about. The seven children were gone, vanished as if by the wave of a wand. Chap Foey Rider frowned.

"Surely, it is reasonable that of seven able-bodied children, one at least is capable of aiding you?"

As if to a lackwit, Mrs. Rider explained. One had homework, two had a date, one was ill from overeating, one was telephoning, one had her head in pin curlers, and the seventh was simply not to be found. Or so she thought, she added quickly.

Intrigued, Chap Foey Rider investigated the phenomenon, at first in his own home, then in the homes of his friends and acquaintances. Within a few weeks, he was able to formulate a universal law: at dishwashing time the world's children remorselessly and absolutely vanish. One moment they were there, the next moment they were gone. The means were problematical, the fact self-evident.

Chap Foey Rider was still confined to his wheelchair. He pondered. Children as Aliens: possible, possible. But was this discovery in itself of intrinsic value? There was a second possibility: a wild talent, inherent in children but lost with the passing of years.

Chap Foey Rider tried to recall his own youth, any possible predilection for teleportation. Impossible; his parents' house had been stuffed to the rafters with servants; never had he been invited to do the dishes. Having received a fair classical education, however, he remembered the words of the poet:

Heaven lies about us in our infancy!
Shades of the prison-house begin to close
Upon the growing Boy,
But he beholds the light, and whence it flows,
He sees it in his joy;
The Youth, who daily farther from the east
Must travel, still is Nature's Priest,
And by the vision splendid
Is on his way attended;
At length the Man perceives it die away,
And fade into the light of common day.

Chap Foey Rider snorted. Wordsworth was all well and good, but was there not a practical advantage to be derived from this phenomenon? He had an abacus and slide rule. He calculated the number of man-years of energy expended by children in contriving their disappearances, the number of ergs generated by their displacements, the worldwide increase in the mean heat level, the consequent melting of the icecaps caused by the smoldering fury of parental displeasure. Theoretically here was a major new source of

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world energy, the equal perhaps of hydrogen fusion. Could it be tapped? He returned his attention to the slide rule . . .

His investigations had been curtailed by his abrupt departure for Italy, but now it all began to come back to him. As he lay in bed that night—Mr. Moo had kindly lent him a bicycle to make his way back to the hotel—he turned the various elements over in his mind.

Had he possibly been, he asked himself, guilty of shortsightedness? While straining after a small and localized phenomenon, had he not ignored the larger implications? Implications as grandiose as the dream of a United Field Theory?

Suppose one were to hypothesize a universal Will To Be Elsewhere on the atomic or molecular level of sufficiently complex organizations of living cells, what then? As the poet had so clearly perceived, might not this trait be inherent at birth and dissipate with maturity save in a few curious instances, instances provoked by an atavistic revulsion to the threat of certain unnatural and perverted physical acts—the washing of dishes, for instance? Working with children might it not be possible to isolate the mechanism, and even, by the use of cloned cells, for example, to construct an actual displacement machine?

But Chap Foey Rider was first and foremost a pragmatist. Before going further it would be necessary to put his theorem to the test. A few additional moments were devoted to determining the means of carrying out a simple yet elegant and conclusive experiment. This resolved, he pulled the bedclothes tighter, snuggled into the pillow, and fell into dreamless sleep.

Early the following morning the passersby on the Rue Gauguin—those few who were able to squeeze their way through the still-immobilized block of cars—and the customers in the *Banque de Tahiti* were treated to a curious spectacle.

The door of a car blocked squarely in the middle of the intersection was plied open by an elderly half-caste and a somewhat younger Chinaman—surely that was Mr. Moo?—and six puzzled Chinese children between the ages of five and sixteen were induced to enter. A moment later a large wash basin, two buckets of water, a scrubbing brush, three sponges, and four dishcloths were carefully passed through the open window.

A look of growing apprehension was now clearly visible upon the faces of the six younger Moos. Their apprehension was well founded, for a moment later a cartonful of stained breakfast dishes carefully collected by Chap Foey Rider from the kitchen of the Hotel Taharaa were in turn passed through the window. The windows were ordered rolled up.

The crowd surrounding the car began to grow. "I knew *Americans* were crazy," said a baffled Tahitian to an incredulous Frenchman, "but

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when our own *Chinamen*—"

But on this memorable morning which would be celebrated by no fewer than six original songs in the island's night spots as early as that very evening, more was yet to come. With the *élan* of a prestidigitator Chap Foey Rider calmly produced as if from nowhere an additional seven cartons of dirty dishes and utensils. The next task was more difficult, but he and Mr. Moo, imperturbable, unheeding of jocular commentary, persevered. Within twenty minutes Chap Foey Rider's rented car had virtually disappeared from view within a mound of dishes, from hood to trunk, from top to bottom. There were pots beneath the car, pans upon the windshield, kettles upon the rear window, cups lashed to the doorhandles. A final dishcloth was affixed jauntily to the antenna.

Satisfied at last, Chap Foey Rider and Mr. Moo stepped back to survey their labors. Apparently they found it good, for the elderly half-caste was observed to nod minutely to his henchman. The crowd, sensing the moment of climax, surged forward.

Mr. Moo cleared his throat nervously, then spoke quietly but authoritatively. "Children," he addressed the now invisible youngsters, hidden from a curious world by the barricade of dishes, "children, *I want you to wash those dishes.*"

The crowd shied back as if in disbelief. Surely he had not said—

There came the soft *ploof* of imploding air, the startling crash of a number of poorly-secured dishes as they fell to a miraculously open pavement, and the total disappearance of dishes, car, and occupants.

Chap Foey Rider and Mr. Moo retired discretely but hastily while the crowd still gaped in astonishment, and made their way to Mr. Moo's modest home. Mrs. Moo was already there, and extremely angry.

"How," she enquired reasonably but acidly, "are you going to remove this car from the children's bedroom?"

Chap Foey Rider calmed her with a benevolent gesture. "A historic moment, Madame Moo. The first, and eminently successful, field test of the Rider-Moo Displacement Machine. A few bugs remain to be worked out, it is true, but first let us release your children from what is certainly a most cruel and unusual punishment. I have heard of Martyrs to Science," murmured Chap Foey Rider smugly, as the children tumbled happily from the car, "but never, I think, was a martyr so sorely inflicted as these."

As he mused with pleasure upon the exact wording of the invitation to be extended to the Board of Directors of the First National Farmers and Murglepickers Bank of Rigel for the inauguration ceremonies of the first locally-developed displacement service in the history of the Galaxy, a horrid thought suddenly crossed his mind. "Good God," he whispered, "who *is* going to wash all these dishes?" ■

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the reference library

LESTER DEL REY

PRAE-JUDICO:

That bit of Latin is the root material for *prejudice*—obviously, something we should all be ashamed of. What it means, however, is judgment in advance; and that is something necessary throughout daily life, because there simply isn't time enough to assess every situation from a clean mental slate. You don't have to taste every batch of quinine to know none of it tastes good, unless greatly diluted.

A book reviewer who claims he makes no prejudgments is either a liar or a fool. If he's at all capable, he has carefully acquired a long list of prejudgments about what is good and bad in the telling of a story. On the whole, experienced and knowledgeable reviewers would agree with each other about many of these judgments. But, humans being more or less what they are, there are also a number of areas where such individual judgments differ. Hence, it's a good idea for a reviewer to take a look at some of his own biases once in a while, and perhaps to share them with his readers.

As most readers of this column must have guessed by now, I tend to like adventure science fiction. On the average, I read a book that promises such adventure from the cover and blurbs the publishers choose, before ones that are apparently lacking in that element. I also want a story that begins somewhere near an important initial event, runs through an interesting and coherent middle, and reaches a resolution that satisfies me as being right for the story. (In most stories, that means a happy one; though a well-established and significant downbeat ending can sometimes be even stronger.)

I want characters that belong in the story. Don't give me an anti-hero as the pilot of the first star ship. He wouldn't be picked for the job. In fact, anti-heroes are usually ridiculous in science fiction, simply because the challenges of the future situations would either eliminate them before the story or kill them off during it. For that matter, I'm not interested in self-pitying slobs in any story as main characters. They don't interest me in life, so why should they interest me in fiction?

Of course, if you can take your slob and make him grow, as Heinlein did in *Double Star*, that's another matter. Characters should be interesting—but above all, they should grow, develop and change during the story. Changing the situation that

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made the problem isn't enough; the real joy of fiction is in the development and growth of character.

There must be at least a readable style. But to me, in most science fiction, story and character are more important. Bad style is usually that which makes the story seem dull; good style is that which brings a feeling of life and excitement to things. Good style, to me, is also that which makes things clear as it goes along.

I know there's an increasing tendency for science fiction to be made complicated and difficult to understand, and I deplore that. Even when the situation is complex, it's up to the writer to make it clear. (Not to remove the mystery from a story involving a mystery—but to make following that mystery easy for the reader.) The reader isn't required to puzzle out the "deep thought" of the writer; it's the writer's job to think all that out and make it lucid. That's what writers supposedly get paid for.

Experimental style? Well, almost none of it is honestly experimental. All those tricks were tried to my knowledge back in the early 1930s and before. They didn't work well enough to be generally adopted, so they should be called failures now, rather than experiments. That doesn't mean real experimenting is wrong—only that only the successful cases should be published. And the del Rey rule of writing goes: When an experimental style works, nobody notices it's an experiment; only the experiments that fail are noticed.

I'm not very impressed by symbolism, either, as that term is usually used. There's nothing wrong with symbols. But they should add to a story, even on casual reading, not substitute for any part of the story. It's all well and good if some perceptive readers know that the whole story is a symbolic analog of everyman's fight to be himself; but was it a good story, taken as entertainment? If not, the writer was too clumsy to do his job properly, not worthy of praise for an effort that failed.

All of this, of course, makes me highly prejudiced, when reviewing here, toward what might be called the elements of good pulp fiction. Well, why not? I'm writing for the readers of this magazine; and let me whisper softly to you – don't you know this is one of the few successful pulp magazines left? I'm reviewing for pulp readers! Thank God!

Usually, because I tend to put story above style (and all the other flubdub too often mistaken for style), I don't attempt to make any detailed report on how a book is written. But once in a while, the basic style does become of major importance. And this is definitely the case with Spider Robinson's **Telempath** (Berkley Putnam, 223 pp., $7.95), the opening segment of which was published in Analog's November 1976 issue as, "By Any Other Name."

Spider Robinson has a brisk, with-it-folksy style, as anyone who has read his review columns elsewhere

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should know, and as he has shown in short stories here. (He's also a nice guy, who has been more than kind to me in his column. But, darn it, a review is a review, etc.)

In his first novel, however, that style simply doesn't fit. It keeps obtruding. There's nothing wrong with it, as *a* style; it is consistent, it moves, it's perfectly clear to almost any modern reader—but it isn't *the* style for the character in this story.

Isham Stone in the story is the son of Jacob Stone, who created some order in a world nearly destroyed. Isham was a child when his father worked with Carlson. Carlson apparently discovered a virus which almost instantly gave every human being the power to sense odors a hundred times better than a wolf could. And this hyperosmia overloaded the senses and drove most people mad. Jacob Stone retreated from the impossible-to-bear city and founded Fresh Start, where a measure of civilization can be maintained.

Isham is brought up with the mission of locating Carlson and avenging the destroyed people. Then he is sent into the city to do his job But he fails, and is saved by the supposed archvillain Carlson, who converts him.

There's a great deal more to the story, including a complicated set of relationships that affect Isham. Generally, as a story, it is satisfactory, and there is a good deal of honest complication and development in it. The ending, however, seems a bit too protracted in setting things to sweetness and light, and the return of one character is a little hard to take.

There is also a murder plan by the use of having chlorine bleach released into a toilet, together with bowl cleaner. True, that produces chlorine, which is a fatal gas. But it's *slowly* fatal. Even a man who can't smell at all would gag on a whiff of chlorine, and would simply get the hell out and suffer no more than a sore throat. Ingenious, but unworkable.

Still, a promising first novel, except for the style. It's current with-it slang, and it's heavily so throughout. Now, if Isham were a man who'd grown up in certain places and reached his majority today, it might fit. But Isham left the city and has lived among highly-educated professional people during most of his life. Nobody else talks that way. He's black—but blacks are no more prone to such speech than anyone else; it depends on how the crowd they go with talk.

This gives a smart-aleck quality to the whole book. But Isham isn't a Runyonesque character, and there's nothing smart-aleck about him. He's a decent, somewhat idealistic—though tough in the real meaning of the word—young man.

Sorry, Spider. I liked a lot of the book, but I found the style totally unsuitable, to the point where it made for uncomfortable reading.

One of the cleverest stylists in science fiction at one time was C. M. Kornbluth. At his best, his words seemed to sparkle with wit and eptitude. When I was editing a magazine, he submitted a story. I loved it. But when I tried to figure out the plot, it all came to pretty standard fare. I started to reject it twice. Then I re-read it, bought it and published

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it. And most of the readers liked it. It takes a touch of genius to make a so-so story live with style–but Cyril Kornbluth had that genius.

Now a representative sample of his work has been collected in **The Best of C. M. Kornbluth**, edited by Frederik Pohl (SF Book Club, 312 pp; Ballantine, 352 pp., $1.95). It includes some of his very best work, as well as a few earlier stories written before his style had fully evolved. There is the classic "The Little Black Bag," which any other writer would have turned into a long (and less forceful) novel. "The Silly Season." "The Luckiest Man in Denv." "Gomez." "The Marching Morons." "The Altar at Midnight." And a baker's dozen other stories. There is also an introduction by Frederik Pohl, who probably knew Cyril better than any other friend–and who collaborated on several top novels with him. There is also a short autobiographical note, with a final line that is surprisingly appropriate for the time, though Cyril died in 1958.

As Pohl points out in one of his introductions to the individual stories, "Kornbluth's writing concerned mostly the foibles of human beings." He had a keen ear and accurate understanding of all the speech and ways of humanity, and his people ring true. Superficially, the portraits are accurate but biting, cynical. But under it all is a genuine human compassion; the cynicism is the protection against too much sympathy, I suspect. Too many dreams turn to ugliness–but somehow, the dreams persist. Try "The Altar at Midnight" for a sample.

I regret that a few of my favorites are not included. I'd like "Thirteen O'Clock" and "That Share of Glory." But we can't have everything, and I'm glad to have so much of Cyril's writing in one book. Recommended.

Style rarely translates–at least it doesn't, with the pedestrian translations we usually get from other languages. (Thomas Mann's works have splendid translations, but nobody has yet managed to Anglicize the marvelous German of Hermann Hesse–who should always be read for style, not content.) As a young reader, I grew so impatient of bad translations that I was forced to learn to read a lot of works in the original languages.

Unfortunately, I never learned the Slavic languages. As a result, I've had to be content with some truly pedestrian and horrendous translations for the little Russian fiction I've read. The resultant response on my part was undoubtedly colored by the gross inaccuracies (many obvious) and clumsiness of the prose.

I'm happy to find that Arkadi and Boris Strugatski have finally been translated into English that doesn't get in the way of the reader. Their **The Final Circle of Paradise**, translated directly from the Russian by Leonid Renen (DAW Books, 172 pp., $1.25), is a welcome chance for readers to approach at least one work of Russian literature without flinching.

My own opinion from the little I'd read, supported by the opinions of those who can read Russian, was that the Strugatskis were probably the finest writers of Russian science

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fiction. (Lem is Polish, not Russian; anyhow, I'm not one of his fans.)

In some ways, this could be a sample of one form of current American science fiction. The people and writing could have come out of a number of American novels without too much distortion. It's a somewhat crazy place we're introduced to at the beginning of the novel—obviously, a city where tourism has reached new highs in catering to those seeking unthinking pleasures and thrills. And it gets steadily wilder, as we begin to taste the levels of perversion that thrill-seeking can produce. (General sensory perversion, not just what our previous generation called sexual perversion.)

There doesn't seem to be much plot as Ivan seeks for contact with somebody in the city. But eventually, we do discover why Ivan is there and what he seeks. There's something called a "slug" which is the ultimate perversion—and which threatens to ruin not only the inhabitants of the tourist heaven but also the entire world. When it is discovered, it is all that it should be for potential horror.

Yet the story is somehow distant from us. Many of the people are well characterized, particularly the young boy, Len—a fine portrait of a desperately frightened child seeking in his own way to master fate, with no help from others. But the pleasure city is suspended in neverland. It could be anywhere, almost. (Maybe it's supposed to be the effete West—but if so, no point is made of that.) And somehow, it is never convincing that so much that is normal in the day could exist with so much disturbance at night. As in other Strugatski work, I find the culture in this novel to be somehow non-homogenous, unstitched.

Curiously, the novel seems not to recognize the existence of transistors. The pocket receivers still use tubes. Is the novel that old, or hasn't Russian transistor technique spread into science fiction yet? [Transistor technology hasn't reached the "Foxbat" jet fighter, apparently. Ed.]

I'd recommend the book as a thoroughly readable novel of Russian science fiction, though I'd probably be less kind if it were American. It's the easiest approach I've found to a novel of this type from Russia, however, and I think some sampling of what's being done in other countries is strongly advisable.

This month, some of the reissues are more important than the originals. One of the things that most delights me about science fiction today is that few of the worthy older books ever go completely out of publication. I'm biased, of course—much of my collection was destroyed when my house burned, and these reissues let me replace valued old friends.

Ballantine Books has brought out **The Complete Venus Equilateral**, by George O. Smith (468 pp., $1.95). That is a lot of book for the money. And certainly this book is entitled to the term "classic" on the colophon. It's complete, too—including the very last V.E. story, hitherto not included in the collection.

Back in 1942, George O. Smith created something of a sensation with these stories. For one thing, he wrote the first story to my knowledge

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that used a satellite for communication. For another, he practically introduced the type of "engineering" science fiction that was often imitated afterwards. The stories were—and are—ingenious, fast-paced and fun to read.

It's a bargain. Get it.

Avon's Equinox SF Rediscovery series has been extremely spotty. The books have ranged from some of the most routine of the old Ace paperbacks to some genuine classics. But in bringing those classics back and keeping them available, Avon has done a service to all new readers.

Ward Moore's **Bring the Jubilee** (222 pp., $2.25) is one of the true classics.

There have been quite a few stories of alternate presents—what might be if some aspect of history had been changed. This is a very old idea. But the best of the type is unquestionably Moore's story of a world in which the South won the War Between the States. It's a quiet, most effective novel. The writing and the characterization are excellent, and the plot moves steadily.

More important, it's convincing. The logic behind it seems sound, and the whole development of the country is consistent with what we know of history.

If you haven't already read it, you should do so.

Ace Books was recently acquired by Grosset & Dunlop. This seems to have been a most happy development. With the new management and sound fiscal basis, I have hopes that Ace will again become the major publisher of science fiction it once was.

For the time being, however, most of the Ace science fiction is in the form of reissues. But recently, they have been showing excellent choice in selecting these.

The two most recent ones I have are from Marion Zimmer Bradley's Darkover series. This series began with two novels back in 1962, and the popularity of the series has increased with each novel since. (There are now ten in all.) Certainly it has become one of the two or three most popular series, though I'm not sure I'd go as far as Baird Searles in saying "it seems destined to be the Foundation of the 1970s." (I wouldn't bet against it, either.)

Curiously, those first two books have not been reissued since 1962 until now. I'm happy to add them to the others on the shelf. **The Planet Savers** (116 pp., $1.50) was originally little more than a long novelette; it's followed here by a new Darkover short story, a curious piece for Bradley, but quite good.

The Sword of Aldones (184 pp., $1.50) is a full novel, and the one that really began the Darkover cult. It's a complicated story of *Comyn* intrigue and dark matrix magic, foreshadowing the later *Heritage of Hastur*. It also presents a somewhat different Darkover than we find in later novels. Bradley refused to be bound by consistency—wisely, I think, since Darkover has evolved and improved. But even the early stories have the wonderful allure of this strange world.

Highly recommended. Now I hope Ace will restore *The Winds of Darkover* so I can complete my depleted library.

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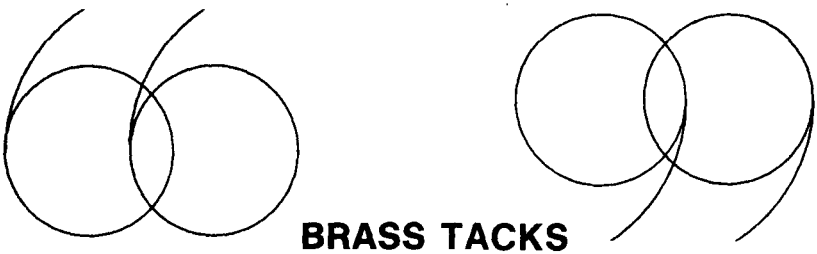

Dear Mr. Ben Bova:

One comment on your editorial on Genetic Politics in August Analog: I agree entirely.

But there is a tiny difference between the analogy with the development of the atomic bomb and the development of genetic engineering.

The development of the bomb required very specialized and expensive equipment (on the order of billions in gas separation of uranium), but *relatively* cheap equipment only is required in genetic manipulation (on the order of thousands of dollars).

Any geneticist that doesn't hold with the moratorium or doesn't have the good judgment to obey the strictures of the Academy of Scientists, can simply ignore them.

Think on that.

WAYNE A. KALLUNKI
1228 Belleview Blvd.
Clearwater, FL 33516

On the other hand, it will be very expensive to protect us from accidents, and to police any protection scheme agreed to.

Dear Mr. Bova:

The molecular biologists who asked for a worldwide moratorium on recombinant DNA experiments are fools of the first division, or perhaps scientists showing great wisdom, though the former is most likely closer to the truth.

Supposing that an undesirable strain of *E. coli* might be mutated by a careless biologist is putting the horse before the cart. If research is not carried on in these areas valuable information and discoveries could easily be lost, perhaps forever. To proceed with caution would be a wise course of action but to ask a governmental body to legislate controls over genetic research is unthinkable. Scientists working for the government have developed "nerve gasses" that could wipe out entire populations with ease and yet a random mutation seems to form a threat of monumental proportions to the people wanting the moratorium. Fools, did I say? I spoke much too kindly.

MARK R. SHARPE
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In other words, shoot first and ask questions afterward. Personally, I prefer the policy of "foolish" caution. We have nothing to lose but a little time.

Dear Mr. Bova:

I would like to point out an interesting correction of a puzzle which appeared in the August 1976 edition of Analog on pp. 133. The puzzle asks "Where on earth a man might stand such that if he were to walk one mile south, one mile east, and then one mile north, he would return to the same spot from which he had departed?" The obvious answer, the North Pole, is cited, and the suggestion is made that there are other places for which this is true. The answer provided in the puzzle itself is deficient in two ways, one trivial and one significant. The answer states that any point on a circle $1+(\frac{1}{2})^{\pi}$ miles North of the South Pole satisfies the statement of the problem.

I. The trivial correction: Instead of $1+(\frac{1}{2})^{\pi}$, the figure should read $1+(1/2\pi)$. Moreover, it should be pointed out that this is an approximation of the actual spherical radius of this circle which is $1+\text{Rarcsin}(1/2\pi R)$, where R is the radius of the earth. Clearly, for large values of R this reduces to simply $1+(1/2\pi)$.

II. The non-trivial correction: There is an entire family of solutions overlooked in even the corrected Analog answer. It will consist of circles about the South Pole, actually meridians, with radii smaller than $1+(1/2\pi)$ miles. The general formula for such circles will give their radii as $1+\text{Rarcsin}(1/2\pi NR)$; where again R is the radius of the earth, and N ranges over the integers: N = 1, 2, 3, . . . This general formula may be approximated as before for large values of R yielding $1+(1/2\pi N)$.

Intuitively, the non-trivial correction introduces an infinite family of circles as the solution to the puzzle. When N = 1, the resulting circle will be just the one mentioned in the answer in Analog. The analysis of that answer is correct as far as it goes. Unfortunately, it doesn't go far enough. Let me quote this statement:

ANSWER: Any point $1+(1/2\pi)$ miles north of the South Pole. (Note my trivial correction)

"Walking one mile south would place him on a circle of one mile circumference centered on the pole. Walking one mile east, he would circumnavigate the globe at that latitude, returning to a point from which he could retrace his steps one mile north to his point of origin."

Taking my non-trivial correction, you will note that when N assumes integral values greater than 1, a journey one mile south would place a traveler on a circle of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, . . . mile circumference centered on the pole. Walking *one mile* east, he would circumnavigate the globe 2, 3, 4, . . . times at that latitude, returning to a point from which he could retrace his steps one mile north to his point of origin. The puzzle simply states that the traveler must walk one mile east; it does not specify whether or not his easterly journey may be reentrant.

TED KORNFELD
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Forest Hills, NY 11375

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The typographical error is the Editor's responsibility. The non-trivial correction seems ingenious, indeed!

Dear Mr. Bova:
Re: "Space Colonization Now: Vision and Reality" by Norman Spinrad (July 1976)

I read this article with great interest but as I progressed through it, my doubts and apprehension grew to the point where I had to express my thoughts.

Space colonies, whether in huge ships or on asteroidal chunks of rock, are great subjects for Science Fiction but what sane thinking person can seriously believe man would be *happy* in such a colony or even survive without developing massive mental disorders. The by-word of our late 20th Century civilization is increasingly, "Let's get away from it all." We must have fresh air, commune with nature, depart the crowded cities.

Why can't our learned doctors or our dedicated congressmen suggest—no, demand!—we use just one very tiny fraction of the 200 billion dollars Dr. O'Neill wants for his space colony and *make* man stop his population growth here on earth where he can then live comfortably?

I strongly advocate worldwide educational programs and distribution of the physical means to control population growth everywhere, be it here or in India or wherever; If that fails, vigorous economic sanctions; as a last resort, force in whatever kind or amount it may require. This is our duty. We cannot dodge it by moving out into a space colony. When the colony grows too big and one faction uses a hydrogen bomb, what then?

GEORGE B. MANGOLD
P.O. Box 233
St. David, AZ 85630

Attention Lief, Christopher, Captain John, and Messrs Penn, Stuyvesant, et al—come home at once *and start teaching school!*

Dear Sir:

In regard to the August 1976 issue of ANALOG, I have two unrelated comments on it to pass along.

First, in the Science Fact article "An Interview with Carl Sagan" the editor's note on page 99 contains two errors. First of all, last year the zip code for National Technical Information Service was changed to 22161. Second, the $3.00 price is obsolete; the minimum price now charged by NTIS is $3.25, and this increases for every 25-page increment up to 600 pages. Since I do not know the number of pages in JPRS-45238, I cannot get the correct price from the current NTIS price schedule.

Second, your typesetters seem to have lots of trouble with mathematical equations. On page 133, the answer to the brain-teaser should read $1 + 1/2\pi$ rather than $1 + 1/2^{\pi}$. Actually, even the corrected form is only an approximation based on the small-angle approximation $\sin x \simeq x$; a more precise formulation would be

$$1 + R_p \operatorname{Arcsin}(1/2\pi R_p)$$

where R_p represents the polar radius of the earth, in miles. Using the small-angle approximation, the Arcsin function is replaced by its argument and the R_p's cancel, leaving the

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corrected approximate answer.

ROBERT H. FRENCH
1919 Rochelle Avenue
Apt. 1831
District Heights, MD 20028

Always glad to get the facts. Thanks.

Dear Mr. Bova:

I am astonished that you printed the letter by A.H. Klotz in the September 1976 Analog. His arguments are completely wrong. Electromagnetism is emphatically *not* excepted from Newton's Third Law of action vs. reaction. His example of a charge moving perpendicular to a current-carrying wire will show this. The *current* (not the wire) creates a magnetic field which exerts a force on the charge, and this induces the charge to produce an electric field which counters the force of the current's magnetic field. Electromagnetic reactionless drives *are* impossible.

I liked William Cochrane's story "Weather War" very much. The subject of weather control is one that has always fascinated me.

I didn't think much of the short stories this time, but the serial and Jeff Hecht's science fact article were interesting and thought-provoking respectively. (September issue).

DAVID C. MERKEL
College Station
Williamsburg, VA 23186

Clarke's Second Law states that, "Whenever a . . . scientist says . . . something is impossible, he's probably wrong."

Dear Mr. Bova:

It's unfortunate that when *Analog* pays attention to science fiction film, the coverage is inaccurate and shot through with the doubtful critical assumptions of a self-appointed expert like Jeff Rovin.

In George Pal's *War of the Worlds*, $1,400,000 went for special effects while $600,000 went for actors, script, direction and the like (*my* figures are taken from page 191 of John Bronsnan's *Movie Magic*).

Rovin suggests that such films were merely special effects showcases, and ". . . not surprisingly, this preoccupation led to the eventual exclusion of plot and characterization from science fiction films."

Surprisingly (and unfortunately for Mr. Rovin and his idea) the best science fiction films have featured excellent special effects, *with* the inclusion of above average plotting and characterization as well.

Science fiction films like *War of the Worlds* can hardly be held responsible for a decline in the quality of science fiction film. Characteristically, the majority of sf films are larded with technical effects—but only because the story demands such production values.

The real reason for the poor quality of most sf films is that most of those in Hollywood responsible for the science fiction films made do not know, care, or understand enough about science fiction itself to make intelligent sf film. The predominance of special effects over other elements in sf films has little to do with the trend of declining quality in sf film. Mr. Rovin should withhold his dubious critical theories from readers, and stick with the facts. As a final insult, it doesn't seem he can

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even do that; what with his budgetary figures for *War of the Worlds* and the misquotation of the title of one of the best known sf films: *The Day the Earth Stood Still.*

A piece on science fiction film in *Analog* should be up to the fine standards other non-fiction features of the magazine must meet, even if (in this case) fewer readers (the well-read sf film fans) of *Analog* bother to point an incriminative finger at the offender.

PETER L. WINKLER
5507 Simpson Avenue
North Hollywood, CA 91607

Jeff Rovin replies: The 'best' science fiction films, such as *The Thing, Man in the White Suit*, and *Charly*, feature no special effects of which to speak; efforts like *2001* and *Forbidden Planet* are the rare exceptions. Incidentally, my *War of the Worlds* figures came from George Pal—and Bob Wise, on whose autobiography I will be collaborating, freely refers to his film simply as *Day the Earth Stood Still.*

Dear Ben:

A nice premise for a story; take a political idea used successfully by Julius Caesar, and apply it to a science fiction plot. Too bad that Eric Vinicoff and Marcia Martin turned it into an ugly little mish-mash with their "Render Unto Caesar."

Sure, Caesar was able to control Gaul by kidnapping the children of that region's leaders and raising them in Rome. Thus, Vinicoff and Martin reason that this is a universal political truth, and that colonists on Mercury could bend Earth's will by kidnapping the children of Earth's leaders. But it can hardly work out quite that way. The savage in Gaul would not be able to find his way to Rome, and even if he could, any attempt he could make to rescue any captives would find the entire military/law enforcement apparatus opposing him. However, in extrapolating into the future, the situation could hardly be the same. The Mercury colonists are not an empire going up against barbarians; rather, Vinicoff and Martin picture them as a minority going up against an opponent (Earth) which has at least equal technology. To then postulate that Mercury would be able to do what Rome had done is idiotic.

Fortunately, the other stories in the August Analog were much better, and I enjoyed it immensely.

DAVID TAGGART
Chandler Road
White River Jct., VT 05001

All right—if you were one of Earth's leaders, would the political victory over the Mercury colonists be worth your child's life?

Dear Ben:

Being involved as I am with the care and repair of vending machines, I found Pat Underhill's "The Money Machine" most interesting. There is one positive aspect of such vendors that Underhill overlooked, however: Keeping the damn things in repair would generate a significant number of jobs!

Also, a comment on the August issue, in reference to a *minor* discontinuity. In "Render Unto Caesar", page 106, the *kaesta* knocks Pavel's weapon from Pavel's hand. At no time during the following action does

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Pavel retrieve the weapon, but on page 107 he is shown drawing the weapon from its holster.

Did I miss something, or does the Walther XX possess that famous property of Thor's hammer?

MICHAEL BANKS
P.O. Box 312
Milford, OH 45150

Another positive aspect for "The Money Machine" idea—high employment! And obviously, Pavel didn't forget to pick up his gun, even though the authors (and editors) forgot to mention it.

Dear Mr. Bova:

I have just read your editorial "Genetic Politics." It is true that the Asilomar Conference may well mark a turning point in the 20th century. Mankind is on the verge of developing a power far greater than atomic energy will ever be. He is also developing a far greater threat.

The major debate centers around the proper means of "biological containment" and how it should be implemented. I have one more means to add to the list. It offers a perfect way of controlling any of the little "beasties" scientists may create.

I propose a biological research space station. Space itself is the containment. The special procedures for an earth-bound lab, air-locks and such, are a matter of course for space travel. At worse, the necessary precautions would only be minor alterations and in the high technology world of space easily accomplished.

If things ever got out of control, the whole station could be directed into the sun. That would finish things once and for all.

This suggestion is a viable alternative that should be seriously considered. Expensive, yes, but safe.

MARK CAMPIDONICA
1612 Beverly Drive
Visalia, CA 93277

And also a theme for good science fiction stories!

Dear Editor:

This is sort of a year-end roundup letter, which I am sending now, sort of to "get my complaints in early."

Serials: This is actually what prompted this letter. I think your serials have been terrible this year—so far. I thought *Dune World* was sort of turgid, but had its good points. But the Dune books have been getting worse as the series has continued. Please, *please* resist the urge to buy the next one, be it *Revenge of the Children of Dune, Dune's Secret Treasure,* or *Dragon Queen of the Moon of Dune.* The same goes for a sequel to *Minotaur in A Mushroom Maze.* I also think you got burned in choosing Silverberg's *Shadrach in the Furnace,* which struck me as overwritten and unrealistic, except for its medical aspects. Too bad you missed *The Stochastic Man.*

Covers and Artwork: I think your artists reacted as I did to your serials. Schoenherr's covers and inside work for *Children* and *Shadrach* were muddy and scribbly. Freas' work on *Mushroom* was also a disappointment. No doubt about it, your best cover and interiors this past nine months were by Mike Hinge. Let's see more of him! Rick Sternbach

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comes a close second for his February and July covers. Let's see more of him, too. Where is Don Davis?? His stuff would be great for Analog. Gaughan and Di Fate are holding their own, but Freas and Schoenherr look to be slipping.

Short Fiction: No doubt about it. Haldeman's "Tricentennial" leads the field, although it was sort of a downer. "A Thrust of Greatness" promised more than it delivered. "A Martian Ricorso" is well worth mentioning as one of your better stories this year. I liked Laumer's "Field Test," but would also like you to pry some Retief stories out of him. Sorry to say, nothing that has appeared this year to date strikes me as obviously good as "Children of All Ages" and "Doing Lennon" did last year.

SANFORD ZANE MESCHKOW
616 Walnut Lane
Philadelphia, PA 19128

Obviously, we disagree! Especially about Schoenherr's artwork.

Dear Mr. Bova:

Just a quick note of appreciation for running *Shadrach in the Furnace.* I've grown quite jaded in my attitude toward sf: the promise of a "literature of ideas" grows hollow the more I read the general crop of fiction, the "Best of . . ." series, et al. . . . Robert Silverberg's novel sparked my interest from the first lines. So intrigued was I, that on spying the October Analog on a newsstand several days before my copy arrived by mail, I invested my dollar and slowly devoured the last of *Shadrach.*

I say slowly because I found myself not wanting the book to end. Only an extremely small number of books have affected me thus: Tolkein's trilogy, *War and Peace, Lost Horizon,* and Graves's *I, Claudius* are the only names which come to me after several minutes' thought. Now the August-October '76 Analogs occupy a special place on my shelves, close by the November '34 Astounding (John Campbell's "Twilight") and the one issue I have containing Clifford Simak's . . . "Aesop."

It's heartening to see this type of beautifully written, progressive novel appear in your magazine. I only wish Mr. Silverberg could return to the fold for a sequel, but I'll be satisfied with reading *Shadrach* from time to time. . . .

PAUL BERRIAULT
215 South Street
Rockville, CT 06066

Heady company, indeed, for any writer! And to buy an extra copy is the highest form of praise.

Dear Ben:

Must take time to reply to a few things said in the October issue, by Lester del Rey in The Reference Library, and Christopher DeVito in Brass Tacks.

del Rey tells us, "Fantasy dealt with mistaken ideas from the past—monsters left over from pre-science days; it was very much past-centered." And DeVito's letter questions the possibility that science is religion, by asking for an explanation of science's effectiveness. "It employs facts, whereas religion is a group of myths that comfort people who

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would prefer not to think for themselves."

Both views are simplistic unto absurdity, and DeVito is downright smug. By "mistaken ideas from the past," del Rey must mean superhuman beings, hybrid monsters, gods, goddesses and the like; these are common elements in fantasy stories. (They're fairly common in sf, even "hard" sf—for what is Odd John but a hypercephalic elf, and the inhabitants of Mesklin are monsters in form if not behavior.)

And religion has not always been the witless, stumbling sham we see around us today. With regards to both myth and religion, even the most ridiculous elements of both have been brought to ground by modern scholars (and some not so modern.) Graves (in his *The Greek Myths,* 1955) says, "True myth may be defined as the reduction to narrative shorthand of ritual mime performed on public festivals . . ." and goes on to describe the historical incidents which may have been condensed into mythic stories.

Jung, throughout his works, believed that myth and religion were expressions of basic "mechanisms" (the term is used very loosely here) in the mind, common to all peoples. He, too, amassed considerable evidence.

And more recently, Giorgio de Santillana and Hertha von Dechend, in *Hamlet's Mill* (1969) elaborate a theory which was succinctly expressed by Eusebius, in the early fourth century AD: "The ancients believed that the legends about Osiris and Isis, and all the other mythological fables (of a kindred sort) have reference either to the stars, their configurations, their risings and settings, etc." (quoted from R.H. Allen's *Star Names, Their Lore and Meaning.*)

In short, Graves believed that true myth was history condensed and codified for easy memorization, for access only to initiates and true believers. De Santillana persuasively argues that much in early myth and epic tales mirrors an even earlier acquaintance with archaeologists are reluctant to give "primitive" people credit for.

Both are critical of Jung's "softer" approach to the problem, for Jung created what amounts to a psychological metaphisic to explain his archetypes; but Graves is unable to explain why these various symbols were chosen by his myth-makers, or at least why they were combined in the ways they were. That leads into the tangled depths of why men behave the way they do, which was Jung's basic concern.

I believe all three approaches are fruitful.

And while DeVito assures us that science works, and is based on facts—what could be more mythic than the tangle of hypotheses coming out of particle physics? Is a quark solidly factual? What happens to an electron in the middle of its jump? And does science *always* work? Ask the engineer fuming over a jinxed machine which *should* behave just like its fellows, but doesn't! Indeed, science has its feet of clay—and any good scientist will admit it, and be challenged by it.

Religion today tries desperately to assume some of the authority of

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science, perhaps because at one time it had the comfortable monopoly of explaining the universe, and funding the only rational observers and seekers of the past. That glory is gone; religion must now battle against psychology to even keep the last vestige of domain. But it does not deserve to be scrapped. What disciplines will science and psychology have to battle against when all of our *chimerae* have been exposed, and when our dearest theories are lost in the shuffle of new world-views? And don't for a moment think our present world-view is the end all of human knowledge; who else has made that mistake in the past?

Lest DeVito and his kind be accused of burning Brunos, and forcing Galileos to recant . . .

GREG BEAR
3565 Linden Avenue
Long Beach, Ca 90807

You set up a subject for argument, and then argue about something else! Neither del Rey nor DeVito challenged the bases or uses of mythology. del Rey was talking about fantasy writing today, *and DeVito spoke about religion* today. *And to equate an evolving set of ideas that's backed by experimental evidence, such as particle physics, with mythology is like calling a manned Mars probe a mythological beast because it exists only in the imagination—so far.*

Dear Mr. Bova:

Thomas Easton's article on "Altruism, Evolution, and Society" is a welcome presentation of Wilson's side of the current hassle over the concepts presented in *Sociobiology.* I don't know how many other Analog readers caught Lewontin's effusions in the March/April 1976 issue of *The Sciences,* but I caught five gross errors of fact without even trying in the Lewontin article; those who responded to the letter column in later issues naturally found many more, since I am not trained in that area of science at all. (I did, however, check my estimation of the Lewontin piece with a competent geneticist.)

It is terribly hard for non-technical people to make head or tail out of an argument like this without unbiased presentations of the basic premises. I want to thank you for your article, and your editorial, especially when you pointed out that rhetoric is much less useful than research. I would guess, off-hand, that eventually a synthesis will be found to be the best working model of behavior; psychologists may agree, having survived the heredity/environment argument with a tentative, but practical working model; perhaps they could give some really effective input here. Incidentally, a good book to continue study in this field (without getting shot down in the battle) is *Heredity, Evolution and Society,* 2nd edition: (1976) by Lerner and Libby.

M. A. BARTTER
3242 Winton Rd. S.
Rochester, NY 14623

A subtle, but important, point to keep in mind is that we should not downgrade Lewontin's objections because they appear to have originated from a sociopolitical base. His objections, as Wilson's original work, should be judged on their scientific merits—not on personality, political, or publicity grounds.

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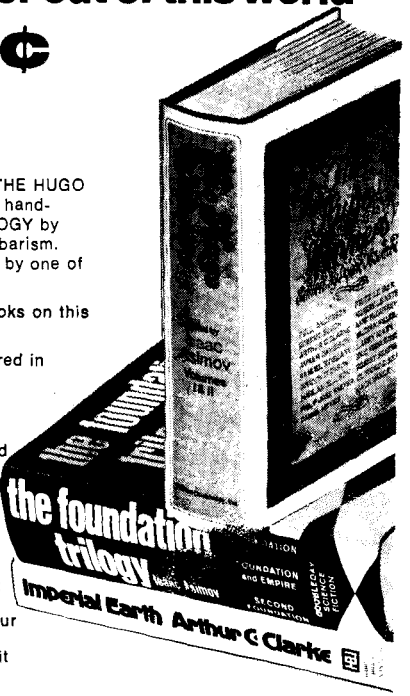

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